DVP-CX985V

SERVICE MANUAL

US Model
Canadian Model

Ver 1.1 2004.09

Self Diagnosis Supported model

ENERGY STAR® is a U.S. registered mark. As an ENERGY STAR® Partner, Sony Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Model Name Using Similar Mechanism	NEW
CD/DVD Mechanism Type	CDM62-DVBU26
Base Unit Name	DVBU26
Optical Pick-up Name	KHM-290AAA

SPECIFICATIONS

System

Laser: Semiconductor laser
λ = 780 nm for CD
λ = 650 nm for SA-CD and DVD
Emission duration: continuous
Signal format system: NTSC

Audio characteristics

Frequency response: DVD VIDEO (PCM 96 kHz): 2 Hz to 44 kHz (44 kHz: –2 dB ±1 dB), Super Audio CD: 2 Hz to 100 kHz (50 kHz: –3 dB ±1 dB), CD: 2 Hz to 20 kHz (±0.5 dB)
Signal-to-noise ratio (S/N ratio): 115 dB (LINE OUT AUDIO L/R 1/2 jacks only)
Harmonic distortion: 0.003 %
Dynamic range: DVD VIDEO/Super Audio CD: 103 dB, CD: 99 dB
Wow and flutter: Less than detected value (±0.001% W PEAK)

Outputs

(**Jack name:** Jack type/Output level/Load impedance)
LINE OUT AUDIO L/R 1/2: Phono jack/2 Vrms/10 kilohms
DIGITAL OUT (OPTICAL): Optical output jack/–18 dBm (wave length: 660 nm)
DIGITAL OUT (COAXIAL): Phono jack/0.5 Vp-p/75 ohms
5.1CH OUTPUT: Phono jack/2 Vrms/10 kilohms
COMPONENT VIDEO OUT(Y, P_B/C_B, P_R/C_R): Phono jack/Y: 1.0 Vp-p/P_B/C_B, P_R/C_R: 0.7 Vp-p/75 ohms
LINE OUT VIDEO 1/2: Phono jack/1.0 Vp-p/75 ohms
S VIDEO OUPUT 1/2: 4-pin mini DIN/Y: 1.0 Vp-p/C: 0.286 Vp-p /75 ohms

General

Power requirements:
120 V AC, 60 Hz
Power consumption: 20 W
Dimensions (approx.): 430 × 189 × 545 mm (17 × 7 1/2 × 21 1/2 in.) (width/height/depth) incl. projecting parts
Mass (approx.): 8.6 kg (18 lb 15 oz)
Operating temperature: 5 °C to 35 °C (41 °F to 95 °F)
Operating humidity: 25 % to 80 %

Supplied accessories

- Audio/video cord (pinplug × 3 ⟷ pinplug × 3) (1)
- Remote commander (remote) (1)
- Size AA (R6) batteries (2)

Specifications and design are subject to change without notice.

CD/DVD PLAYER

9-961-042-02
2004I05-1
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Sony Corporation
Audio Group
Published by Sony Engineering Corporation

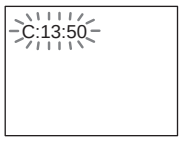
SONY®

SELF DIAGNOSIS FUNCTION

Self-diagnosis Function

(When letters/numbers appear in the display)

When the self-diagnosis function is activated to prevent the player from malfunctioning, a five-character service number (e.g., C 13 50) with a combination of a letter and four digits appears on the screen and the front panel display. In this case, check the following table.



First three characters of the service number	Cause and/or corrective action
C 13	The disc is dirty. ➡ Clean the disc with a soft cloth
C 31	The disc is not inserted correctly. ➡ Re-insert the disc correctly.
C 32	The front cover automatically opens and the player enters standby mode. ➡ Check that there is nothing wrong inside the rotary table, such as a fallen disc. After you have checked the inside of the rotary table and resolved any possible problems, press ⏏.
E XX (xx is a number)	To prevent a malfunction, the player has performed the self-diagnosis function. ➡ Contact your nearest Sony dealer or local authorized Sony service facility and give the 5-character service number. Example: E 61 10

Note: Refer to the "5. TEST MODE" (page 23) for another self-diagnosis function.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage.
Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes.). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

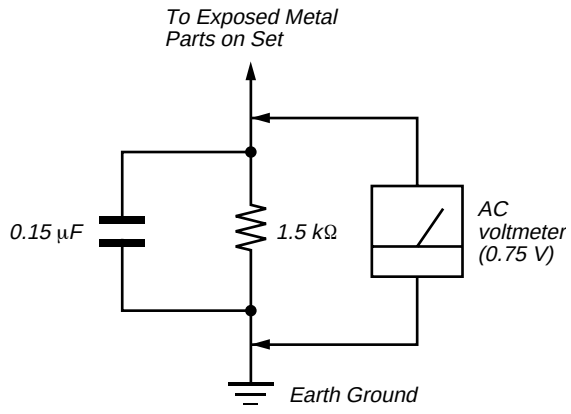


Fig. A. Using an AC voltmeter to check AC leakage.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

UNLEADED SOLDER

Boards requiring use of unleaded solder are printed with the lead-free mark (LF) indicating the solder contains no lead.
(Caution: Some printed circuit boards may not come printed with the lead free mark due to their particular size)

: LEAD FREE MARK

Unleaded solder has the following characteristics.

- Unleaded solder melts at a temperature about 40 ˚C higher than ordinary solder.
  Ordinary soldering irons can be used but the iron tip has to be applied to the solder joint for a slightly longer time.
  Soldering irons using a temperature regulator should be set to about 350 ˚C.
  Caution: The printed pattern (copper foil) may peel away if the heated tip is applied for too long, so be careful!
- Strong viscosity
  Unleaded solder is more viscou-s (sticky, less prone to flow) than ordinary solder so use caution not to let solder bridges occur such as on IC pins, etc.
- Usable with ordinary solder
  It is best to use only unleaded solder but unleaded solder may also be added to ordinary solder.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

This Player Can Play the Following Discs

Format of discs	
DVD VIDEO	
DVD-RW	
Super Audio CD	
VIDEO CD	
Music CD	

"DVD VIDEO" and "DVD-RW" are trademarks.

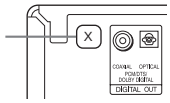
Region code

Your player has a region code printed on the back of the unit and will only play DVD VIDEOs (playback only) labeled with identical region codes. This system is used to protect copyrights.

DVD VIDEOs labeled ALL will also play on this player.

If you try to play any other DVD VIDEO, the message "Playback prohibited by area limitations." will appear on the TV screen. Depending on the DVD VIDEO, no region code indication may be labeled even though playing the DVD VIDEO is prohibited by area restrictions.

Region code



Example of discs that the player cannot play

The player cannot play the following discs:
- All CD-ROMs (including PHOTO CDs)/ CD-Rs/CD-RWs other than those recorded in the following formats:
  – music CD format
  – video CD format
  – MP3 format that conforms to ISO9660* Level 1/Level 2, or its extended format, Joliet
- Data part of CD-Extras
- DVD-ROMs
- DVD Audios

* A logical format of files and folders on CD-ROMs defined by ISO (International Standards Organization).

Also, the player cannot play the following discs:
- A DVD VIDEO with a different region code.
- A disc recorded in a color system other than NTSC, such as PAL or SECAM (this player conforms to the NTSC color system).
- A disc that has a non-standard shape (e.g., card, heart).
- A disc with paper or stickers on it.
- A disc that has the adhesive of cellophane tape or a sticker still left on it.

Notes

- **Note about DVD-RWs/DVD-Rs, DVD+RWs/ DVD+Rs, or CD-Rs/CD-RWs.**
  Some DVD-RWs/DVD-Rs, DVD+RWs/ DVD+Rs, or CD-Rs/CD-RWs cannot be played on this player due to the recording quality or physical condition of the disc, or the characteristics of the recording device and authoring software. Also, images in DVD-RWs with CPRM* protection may not be played if they contain a copy protection signal. "Copyright lock" appears on the screen. For more information, see the operating instructions for the recording device.
  Note that discs created in the Packet Write format cannot be played.
  * CPRM (Content Protection for Recordable Media) is a coding technology that protects copyright for images.
- **Music discs encoded with copyright protection technologies**
  This product is designed to playback discs that conform to the Compact Disc (CD) standard. Recently, various music discs encoded with copyright protection technologies are marketed by some record companies. Please be aware that among those discs, there are some that do not conform to the CD standard and may not be playable by this product.

Note on playback operations of DVDs and VIDEO CDs

Some playback operations of DVDs and VIDEO CDs may be intentionally set by software producers. Since this player plays DVDs and VIDEO CDs according to the disc contents the software producers designed, some playback features may not be available. Also, refer to the instructions supplied with the DVDs or VIDEO CDs.

Copyrights

This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

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SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

NOTE OF REPLACING THE MB BOARD

When replacing the MB board, since the adjustment value is not set up correctly, “Drive Auto Adjustment” can’t be performed.
In this case, initialize Memory in the following procedures.

Procedure:

1. Set the test mode. (See page 23)
2. Press the [2] key of the remote commander, and set the “DRIVE MANUAL OPERATION”. (See page 29)
3. Press the [6] key of the remote commander, and set the “2-6, Memory Check”. (See page 32)
4. Press the [CLEAR] key of the remote commander, and initialize Memory.

CHECK OF POWER BOARD WITH THE POWER ON

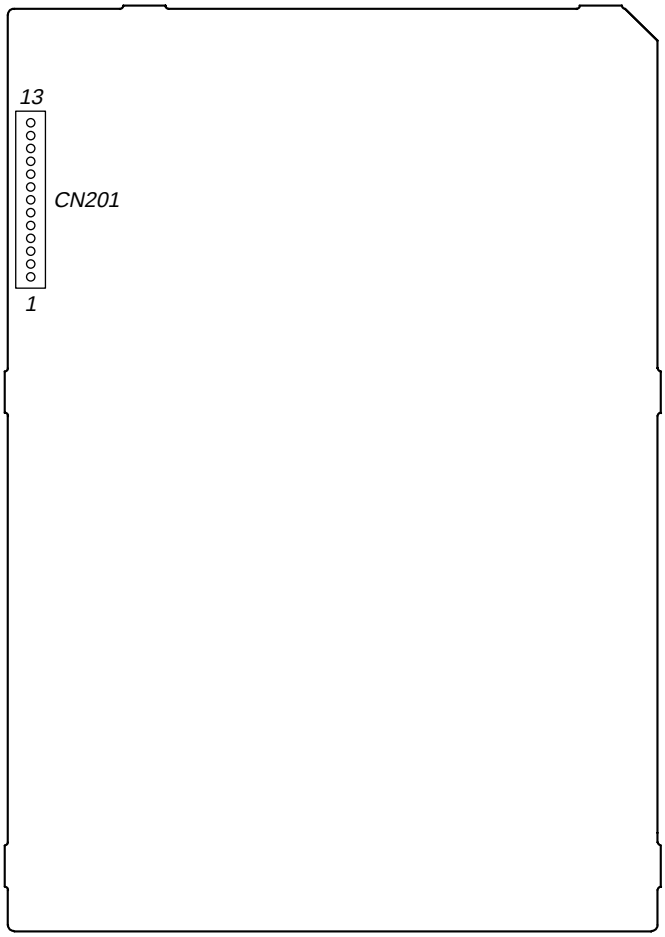
It is possible to analyze the defect with only POWER board power ON.

Procedure:

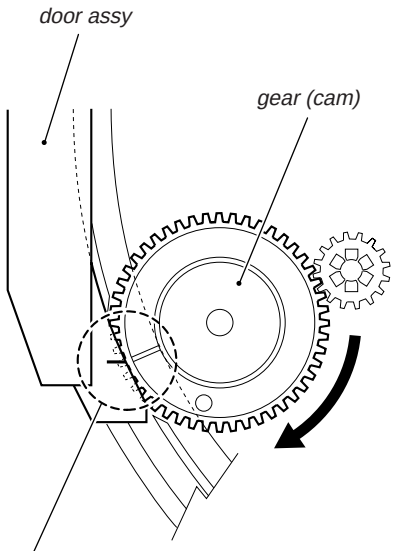
1. Set to power OFF state.
2. Remove the connector from CN201 on the POWER board.
3. Short between CN201 pin ① (P-CONT) and CN201 pin ⑪ (EVER+3.3V) on the POWER board.
4. Turn the power ON.
5. Confirm that the voltage value of CN201 each pin on the POWER board satisfy following value .

CN201 Pin	Voltage Value
pin ② (EVER–11V)	–11V
pin ③ (SW–11V)	–11V
pin ⑥, ⑦ (SW+11V)	+11V
pin ⑧ (SW+3.3V)	+3.3V
pin ⑪ (EVER+3.3V)	+3.3V
pin ⑫ (SW+5V)	+5V
pin ⑬ (EVER+11V)	+11V

– POWER Board (Conductor Side) –

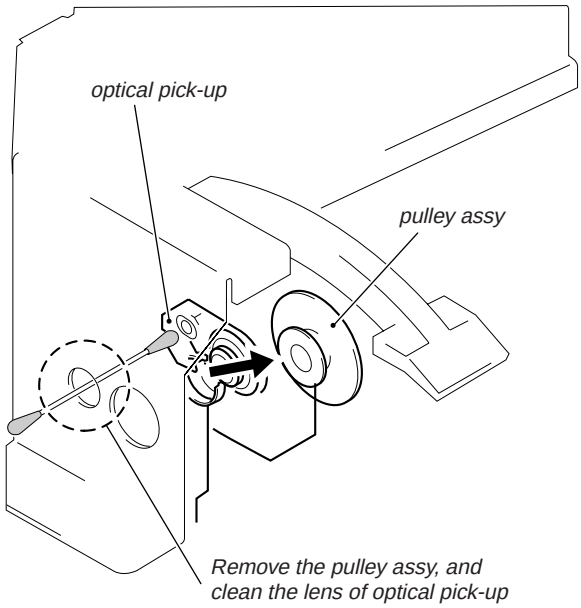


ALIGNMENT OF GEAR (CAM) PHASE WITH DOOR ASS'Y



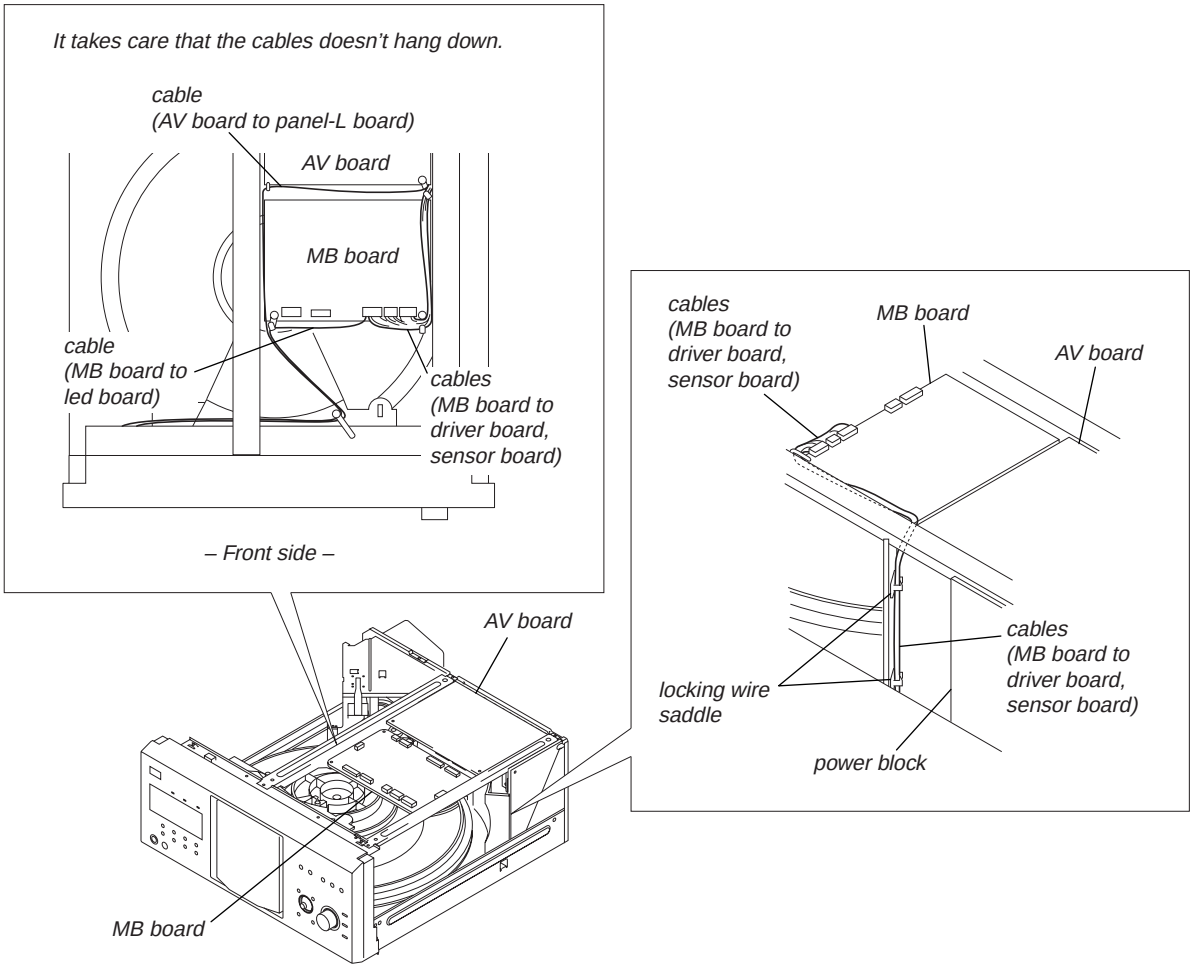
Align a slit of door assy with a marking on the bottom land of gear tooth when the gear is rotated fully in arrow direction, as shown.

CLEANING OF OPTICAL PICK-UP

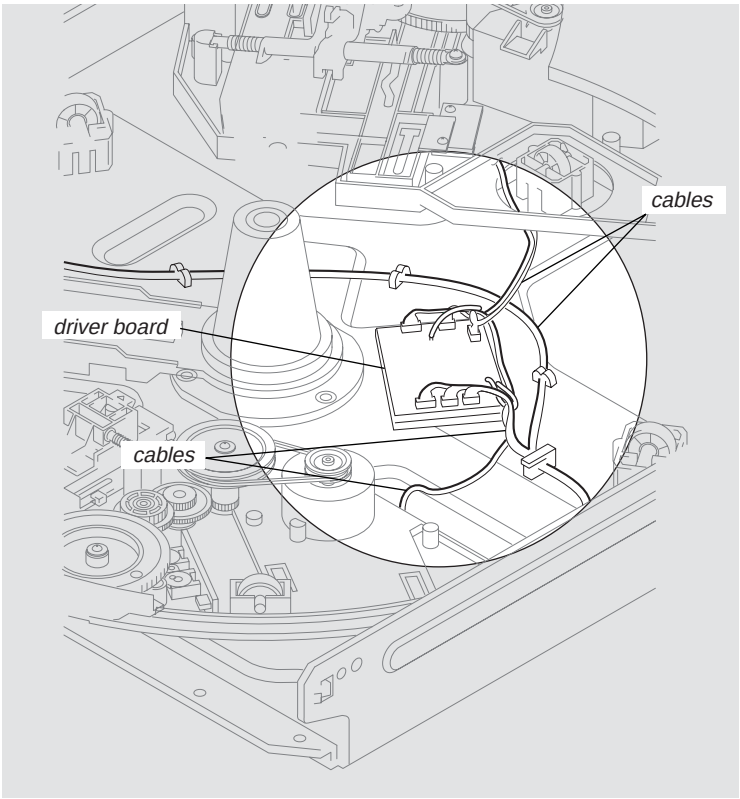


Remove the pulley assy, and clean the lens of optical pick-up through this hole.

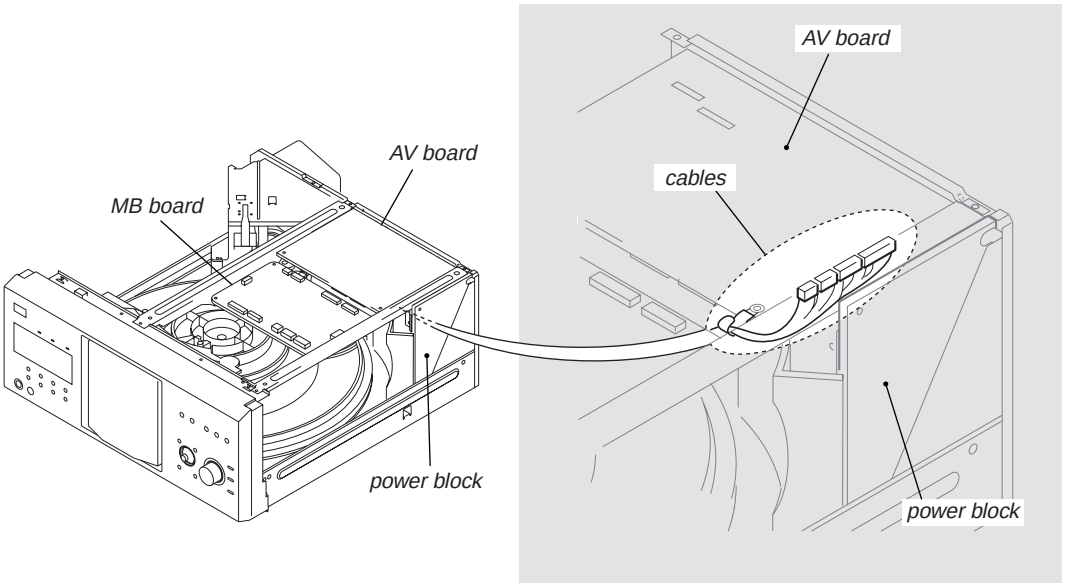
NOTE FOR INSTALLATION



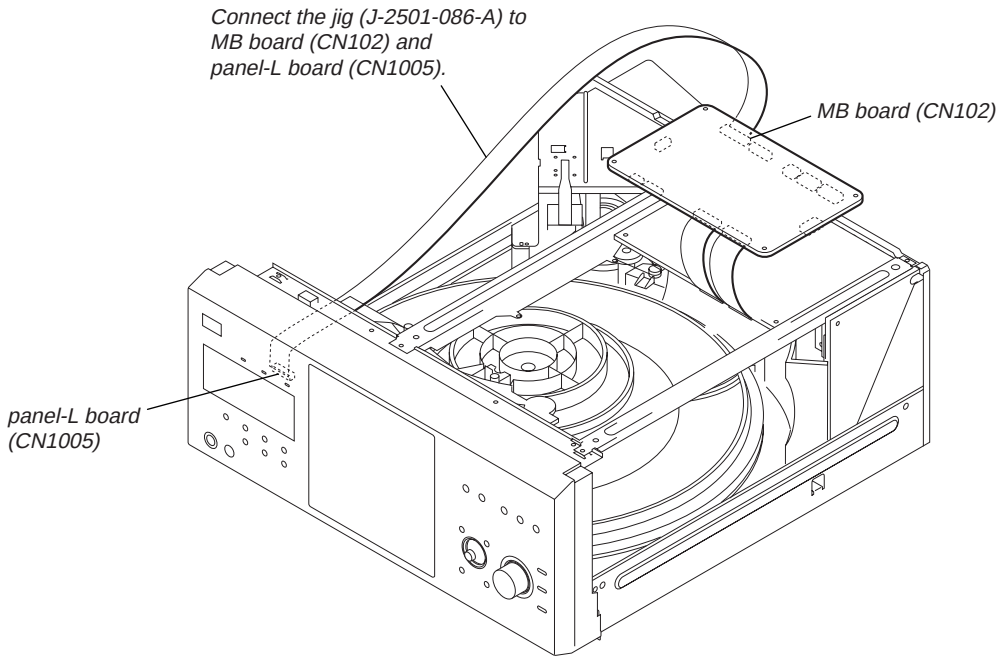
When installing the cables, it is made to make it crawl in a chassis.



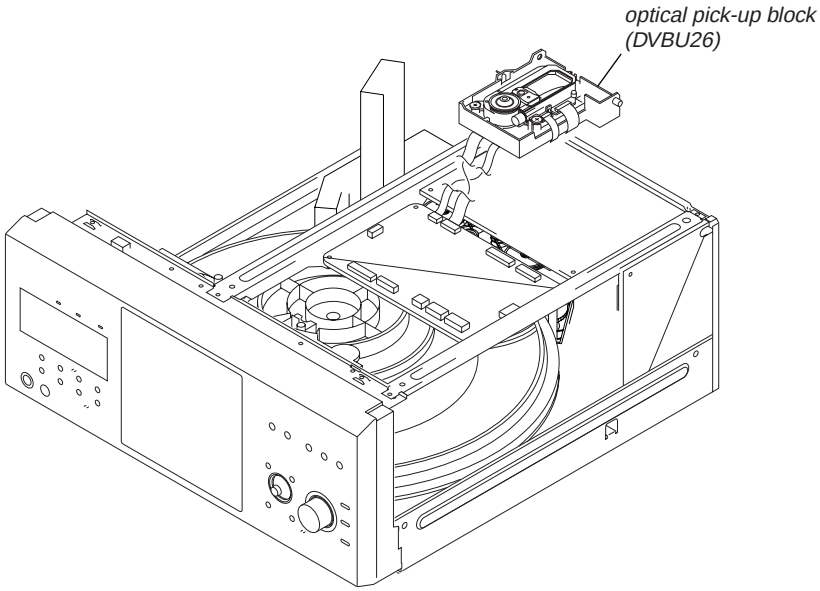
It is made to contact and for there not to be a power block and cables.



SERVICE POSITION
– MB board –



– Optical pick-up block –



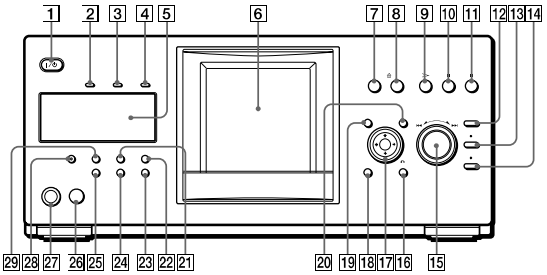
SECTION 2
GENERAL

This section is extracted from instruction manual.

Index to Parts and Controls

For more information, see the pages in parentheses.

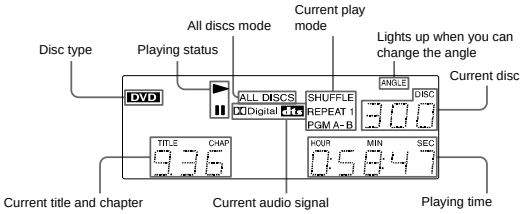
Front panel



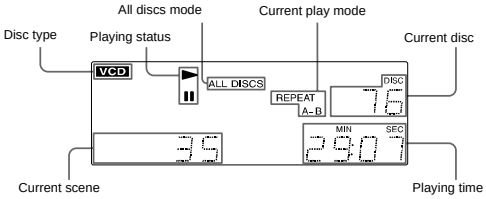
1 I/⏻ (on/standby) button
2 PROGRESSIVE indicator
Lights up when the player outputs progressive signals.
3 SACD (Super Audio CD) indicator
Lights up when:
— playing a Super Audio CD.
— no disc is inserted.
4 MULTI CHANNEL indicator
Lights up when:
—Playing a track or chapter that contains three or more audio signal channels.
— no disc is inserted.
5 Front panel display
6 Front cover
7 OPEN/CLOSE button
8 ⏏ DISC EJECT button
9 ▷ (play) button
10 ❚❚ (pause) button
11 ■ (stop) button
12 +100 button
13 DISC CHANGE button/indicator
14 DIRECT SEARCH button/indicator
15 I◀◀ –/▶▶I+/ENTER (previous/next/enter) dial
16 ↩ RETURN button
17 ←/↑/↓/→/ENTER buttons
18 DISPLAY button
19 TOP MENU button
20 MENU button
21 PICTURE MODE button
22 SURROUND button
23 ONE/ALL DISCS button
24 FOLDER button
25 LOAD button
26 R (remote sensor)
27 KEYBOARD jack
28 FL OFF button/indicator
29 TIME/TEXT button

Front panel display

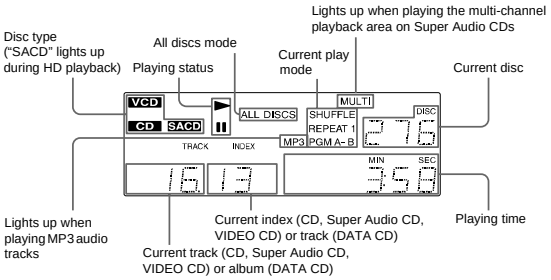
When playing back a DVD VIDEO/DVD-RW



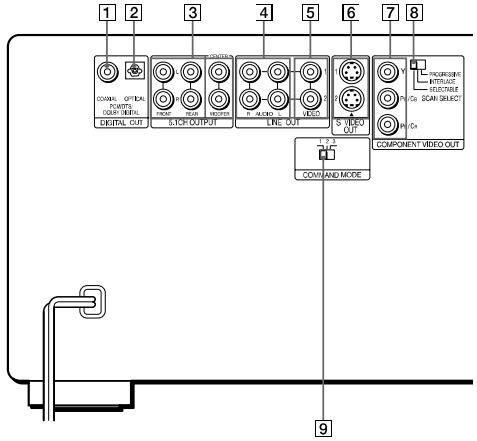
When playing back a VIDEO CD with Playback Control (PBC)



When playing back a CD, Super audio CD, DATA CD (MP3 audio), or VIDEO CD (without PBC)

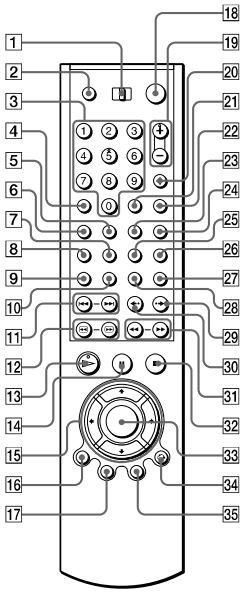


Rear panel



1 DIGITAL OUT (COAXIAL) jack
2 DIGITAL OUT (OPTICAL) jack
3 5.1CH OUTPUT jacks
4 LINE OUT AUDIO L/R 1/2 jacks
5 LINE OUT VIDEO 1/2 jacks
6 S VIDEO OUT 1/2 jacks
7 COMPONENT VIDEO OUT (Y, PB/CB, PR/CR) jacks
8 COMPONENT VIDEO OUT/SCAN SELECT switch
9 COMMAND MODE switch

Remote



1 TV/DISC EXPLORER/DVD switch
2 OPEN/CLOSE button
3 Number buttons
The number 5 button has a tactile dot.*
4 CLEAR button
5 SUR (surround) button
6 PICTURE MODE button
7 SUBTITLE button
8 AUDIO button
9 PICTURE NAVI (picture navigation) button
10 REPEAT button
11 I◀◀ /▶▶I PREV/NEXT (previous/next) buttons
12 ◀◀II⏪/⏩II▶▶ SEARCH/STEP buttons
13 ▷ PLAY button
The ▷ button has a tactile dot.*
14 ❚❚ PAUSE button
15 ←/↑/↓/→ buttons
16 DISPLAY/FILE button
17 TOP MENU/EDIT button
18 I/⏻ (on/standby) button
19 VOL (volume) +/– buttons
The + button has a tactile dot.*
20 TV/VIDEO/DISC SKIP + button
21 ENTER button
22 WIDE MODE/DISC SKIP – button
23 FOLDER button
24 PICTURE MEMORY button
25 ANGLE button
26 TIME/TEXT button
27 SACD/CD (Super Audio CD/CD) button
28 SACD MULTI/2CH (Super Audio CD multi/2 channel) button
29 •➔ INSTANT SEARCH button
30 ➔• INSTANT REPLAY button
31 ◀I ◀◀/▶▶ I▶ SCAN/SLOW buttons
32 ■ STOP button
33 ENTER button
34 ↩ RETURN button
35 MENU/SORT button

* Use the tactile dot as a reference when operating the player.

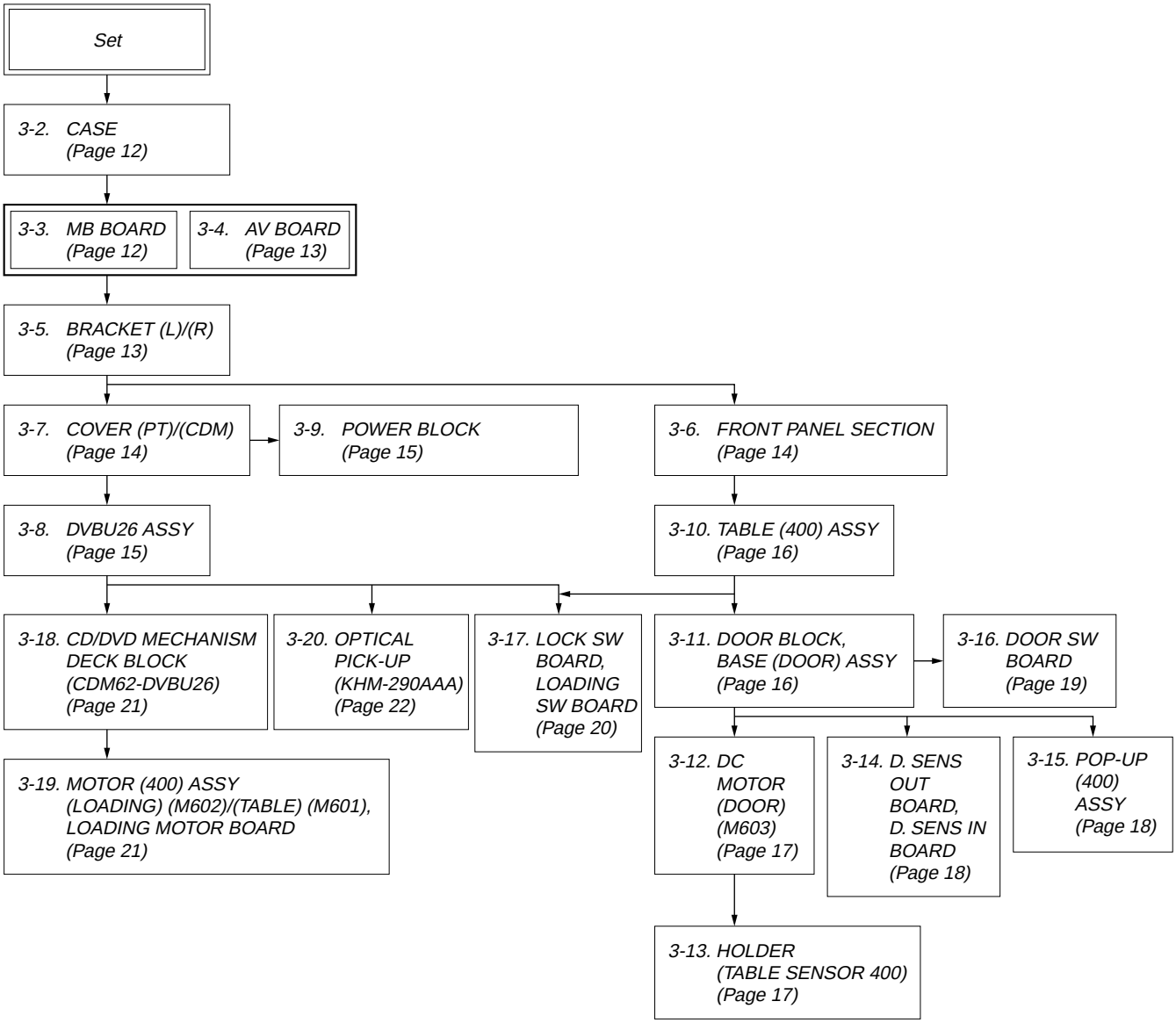
SECTION 3
DISASSEMBLY

• This set can be disassembled in the order shown below.

3-1. DISASSEMBLY FLOW

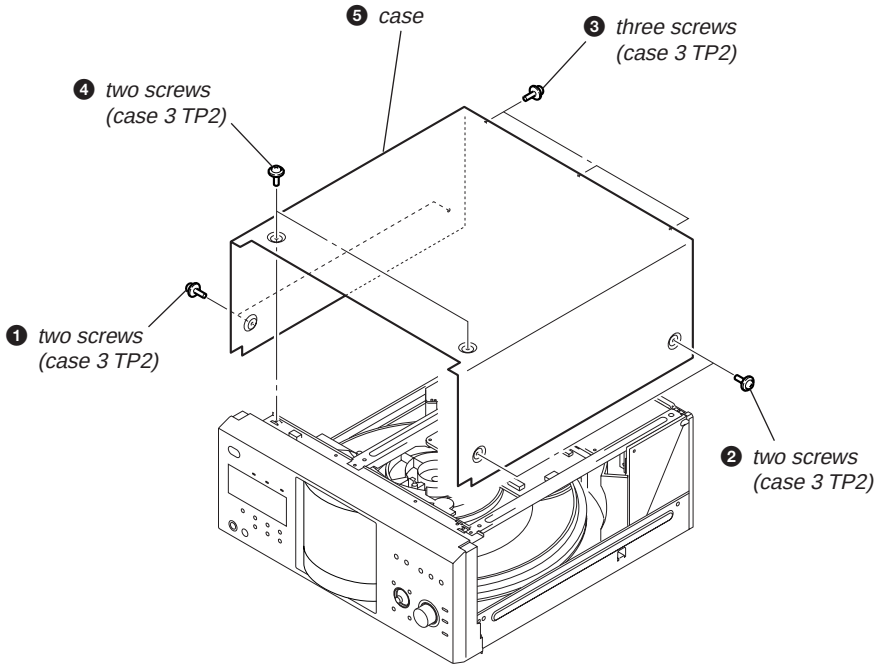
Note 1: *The process described in ⊟ can be performed in any order.*

Note 2: *Without completing the process described in ⊟, the next process can not be performed.*

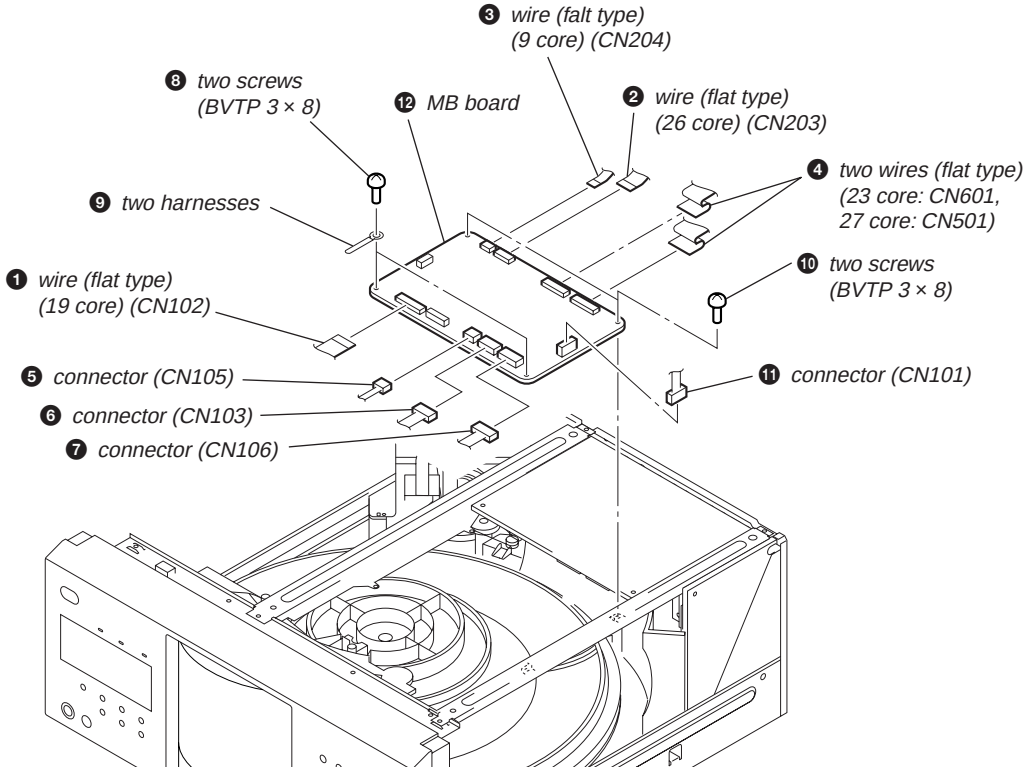

Set
3-2. CASE (Page 12)
3-3. MB BOARD (Page 12)
3-4. AV BOARD (Page 13)
3-5. BRACKET (L)/(R) (Page 13)
3-7. COVER (PT)/(CDM) (Page 14)
3-9. POWER BLOCK (Page 15)
3-6. FRONT PANEL SECTION (Page 14)
3-8. DVBU26 ASSY (Page 15)
3-10. TABLE (400) ASSY (Page 16)
3-18. CD/DVD MECHANISM DECK BLOCK (CDM62-DVBU26) (Page 21)
3-20. OPTICAL PICK-UP (KHM-290AAA) (Page 22)
3-17. LOCK SW BOARD, LOADING SW BOARD (Page 20)
3-11. DOOR BLOCK, BASE (DOOR) ASSY (Page 16)
3-16. DOOR SW BOARD (Page 19)
3-19. MOTOR (400) ASSY (LOADING) (M602)/(TABLE) (M601), LOADING MOTOR BOARD (Page 21)
3-12. DC MOTOR (DOOR) (M603) (Page 17)
3-14. D. SENS OUT BOARD, D. SENS IN BOARD (Page 18)
3-15. POP-UP (400) ASSY (Page 18)
3-13. HOLDER (TABLE SENSOR 400) (Page 17)

Note: Follow the disassembly procedure in the numerical order given.

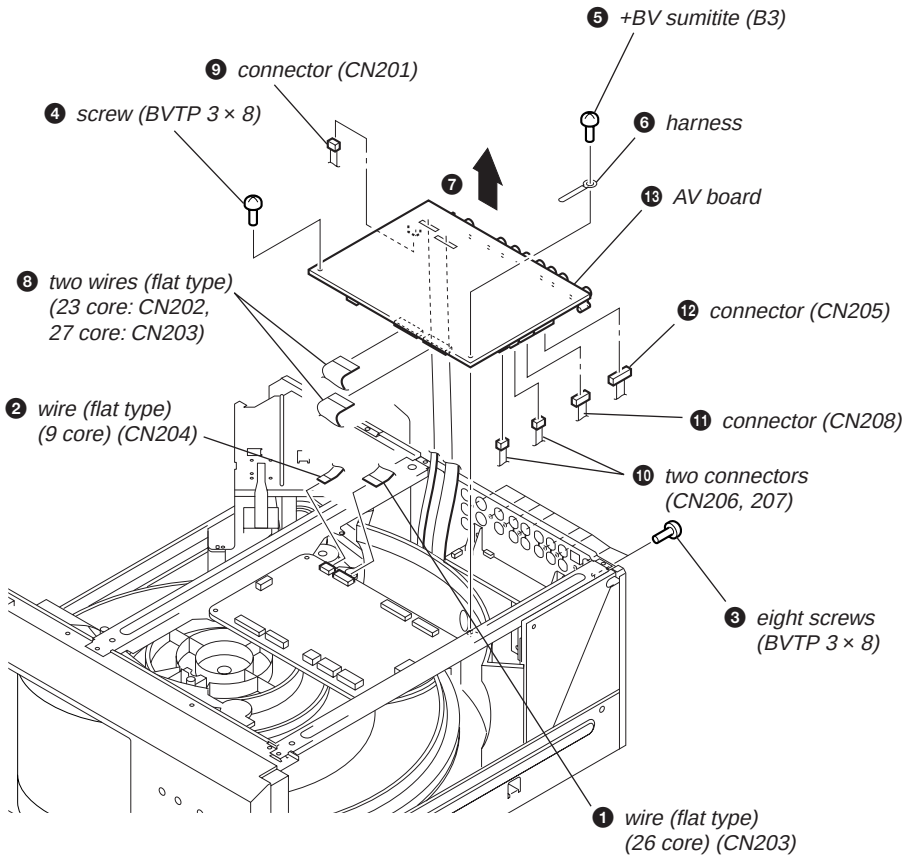
3-2. CASE



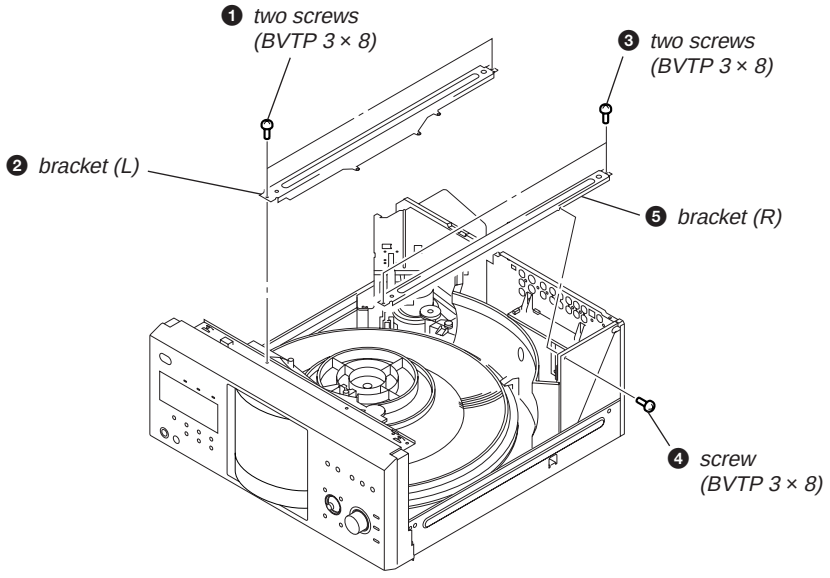
3-3. MB BOARD



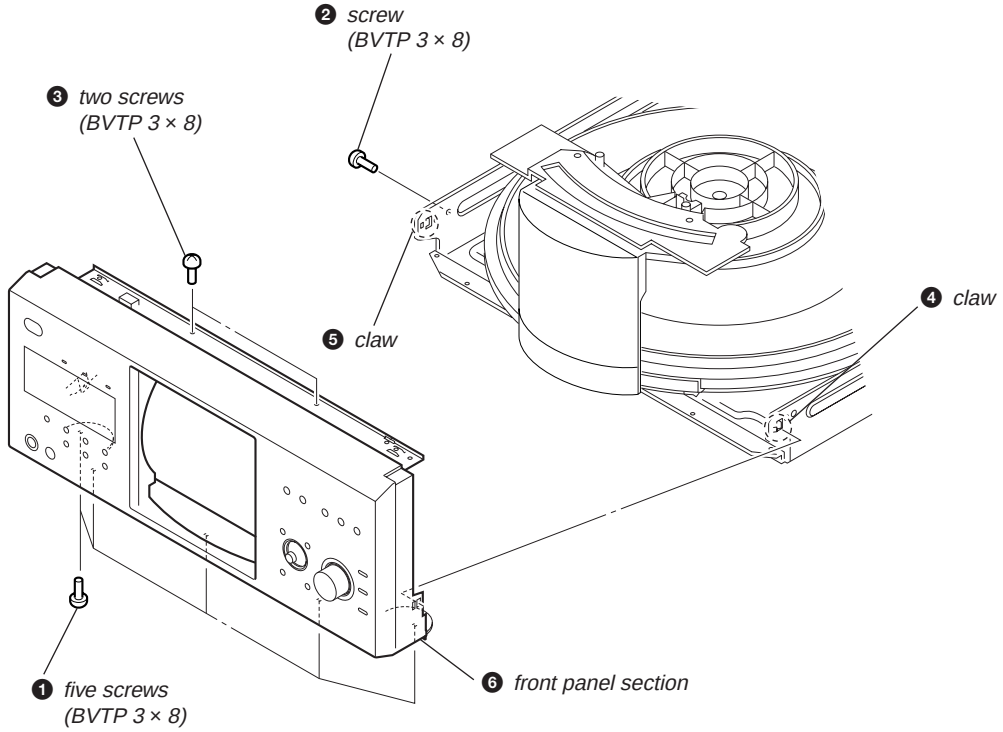
3-4. AV BOARD



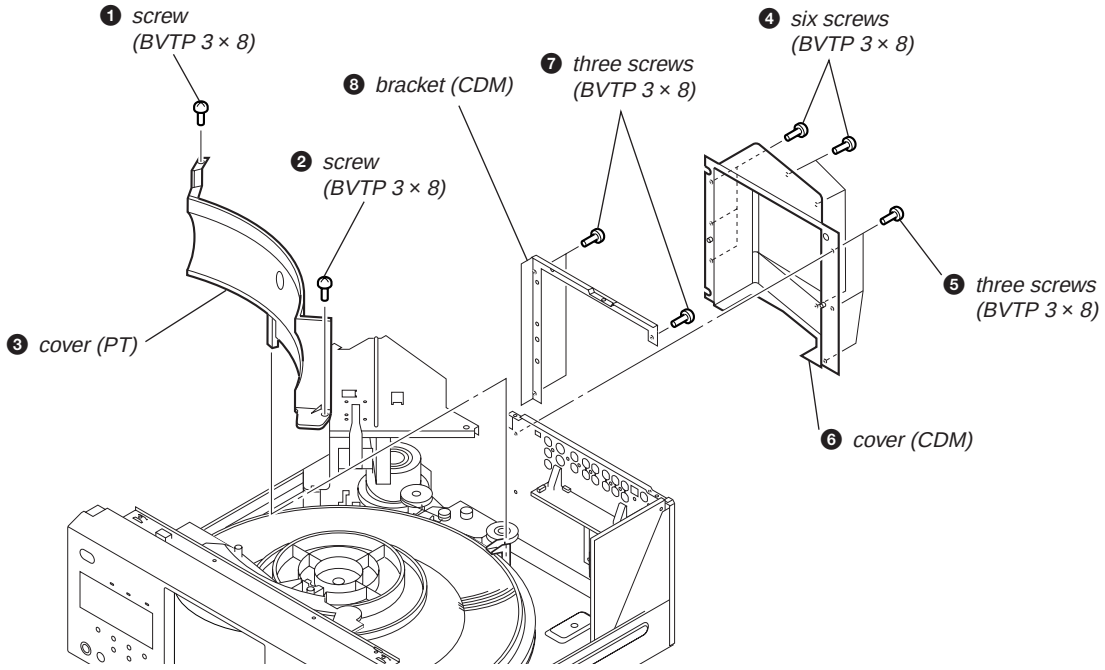
3-5. BRACKET (L)/(R)



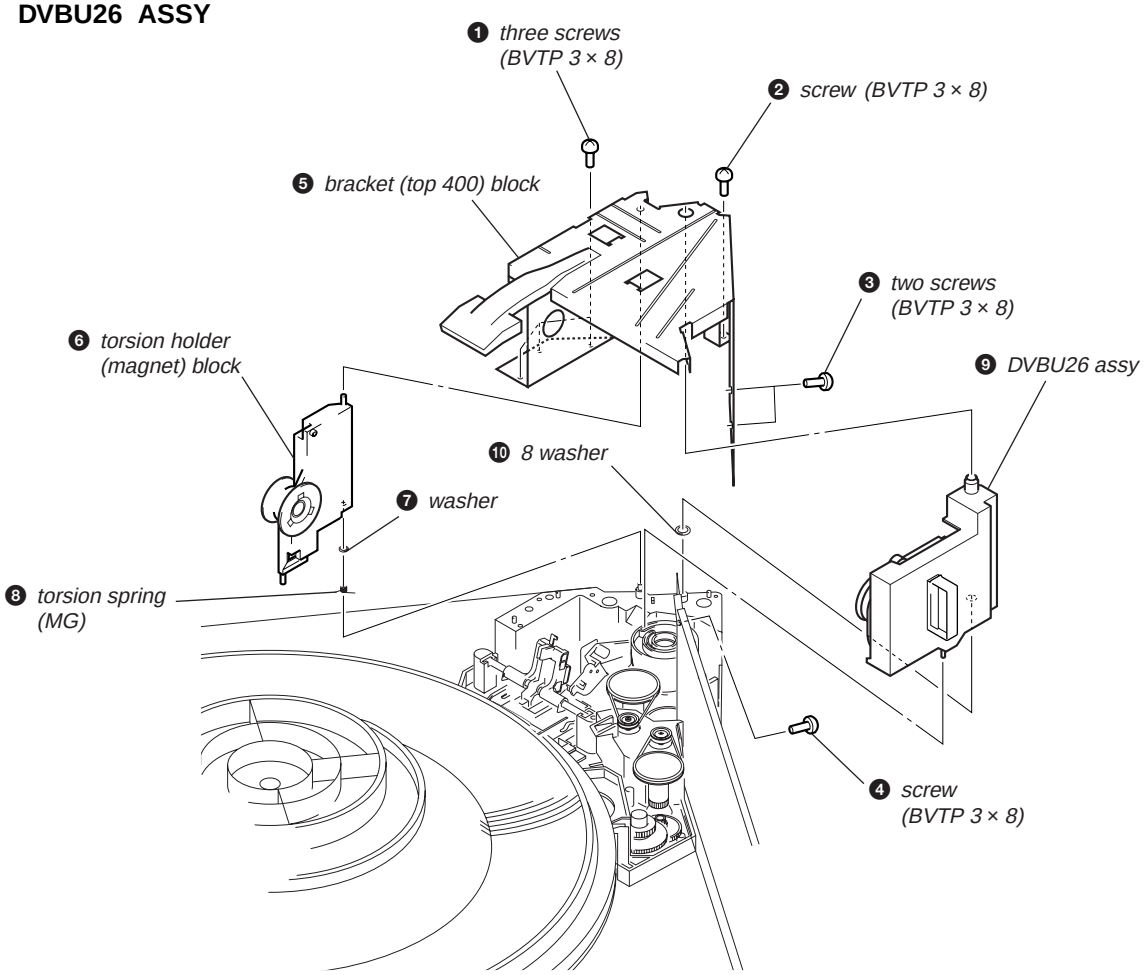
3-6. FRONT PANEL SECTION



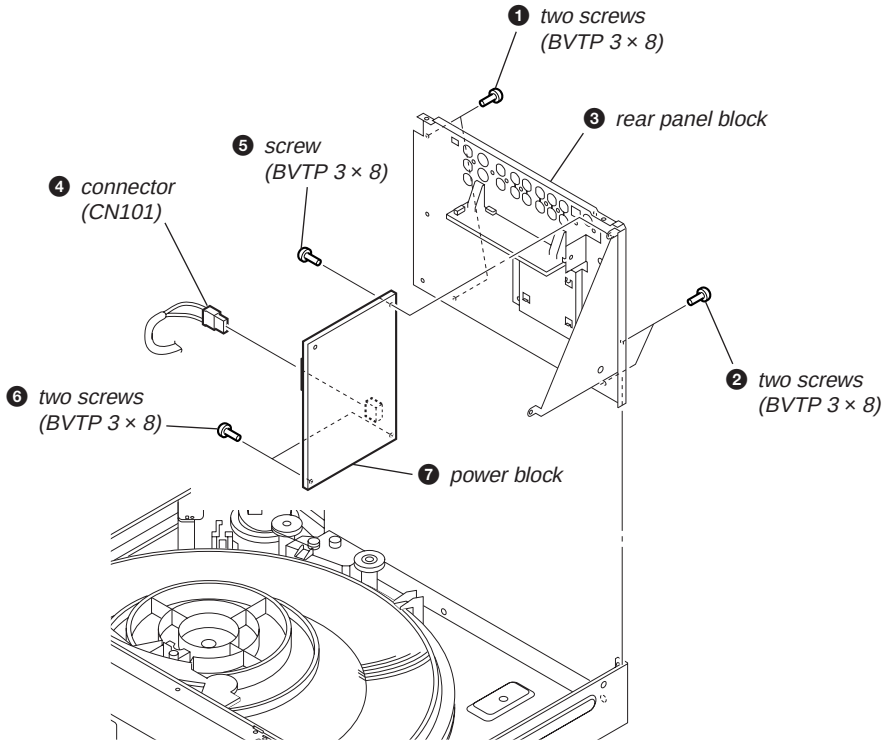
3-7. COVER (PT)/(CDM)



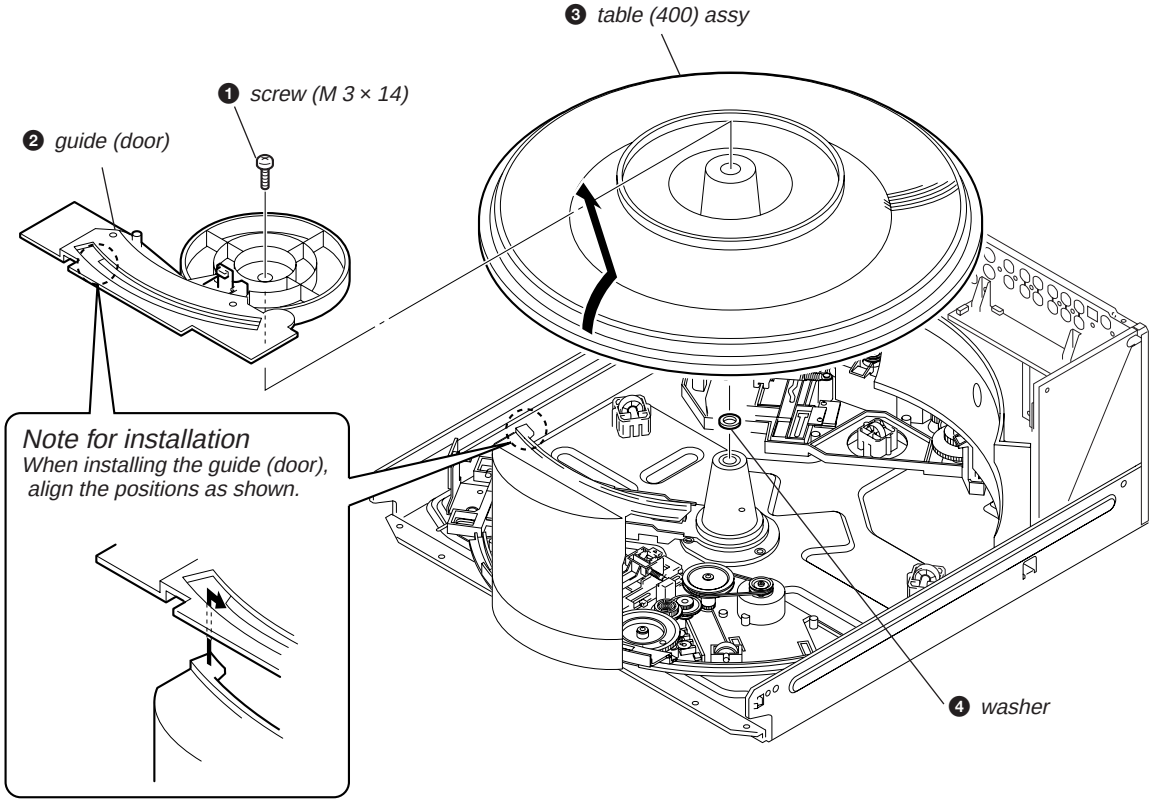
3-8. DVBU26 ASSY


❶ three screws (BVTP 3 × 8)
❷ screw (BVTP 3 × 8)
❺ bracket (top 400) block
❸ two screws (BVTP 3 × 8)
❻ torsion holder (magnet) block
❾ DVBU26 assy
❿ 8 washer
❼ washer
❽ torsion spring (MG)
❹ screw (BVTP 3 × 8)

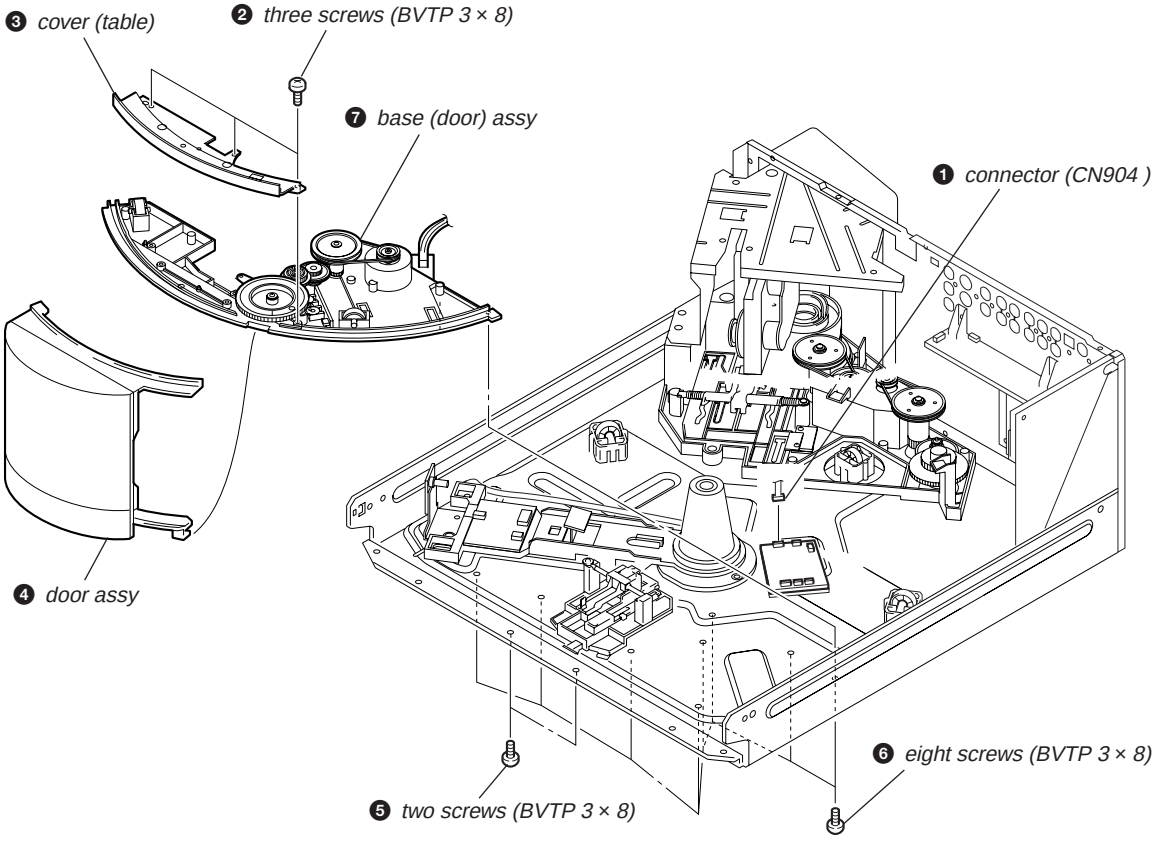
3-9. POWER BLOCK


❶ two screws (BVTP 3 × 8)
❸ rear panel block
❺ screw (BVTP 3 × 8)
❹ connector (CN101)
❷ two screws (BVTP 3 × 8)
❻ two screws (BVTP 3 × 8)
❼ power block

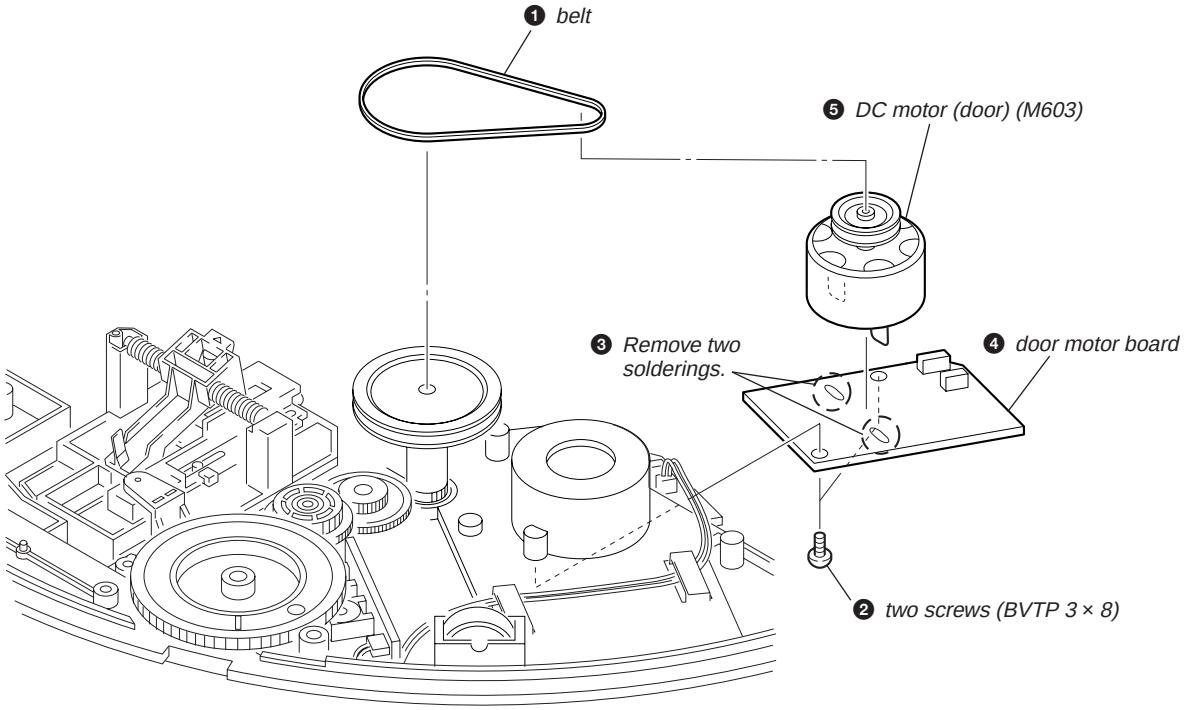
3-10. TABLE (400) ASSY


❸ table (400) assy
❶ screw (M 3 × 14)
❷ guide (door)
Note for installation
When installing the guide (door), align the positions as shown.
❹ washer

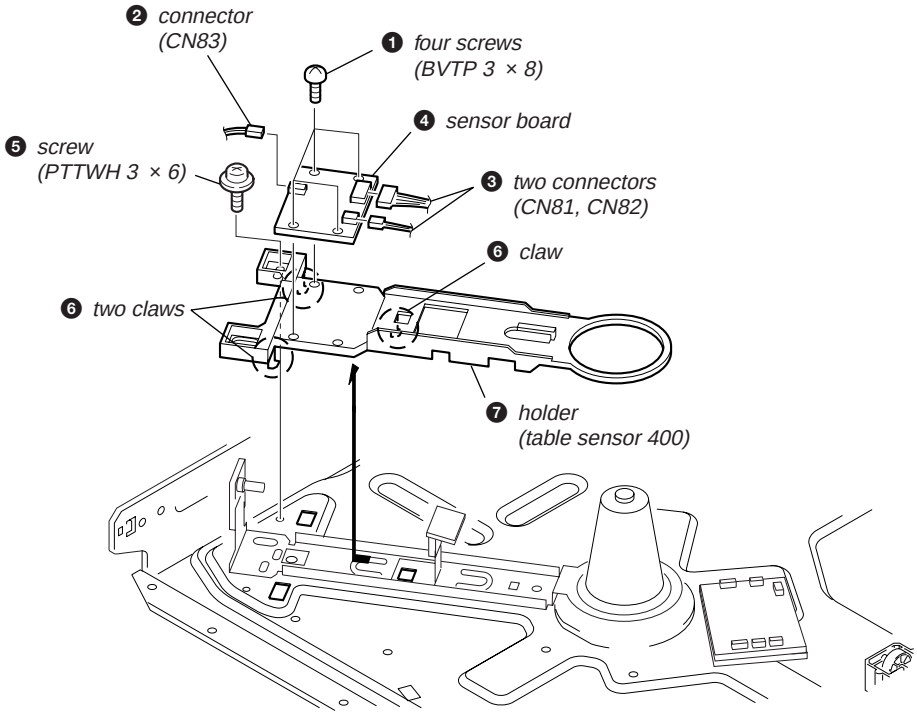
3-11. DOOR BLOCK, BASE (DOOR) ASSY


❸ cover (table)
❷ three screws (BVTP 3 × 8)
❼ base (door) assy
❶ connector (CN904)
❹ door assy
❻ eight screws (BVTP 3 × 8)
❺ two screws (BVTP 3 × 8)

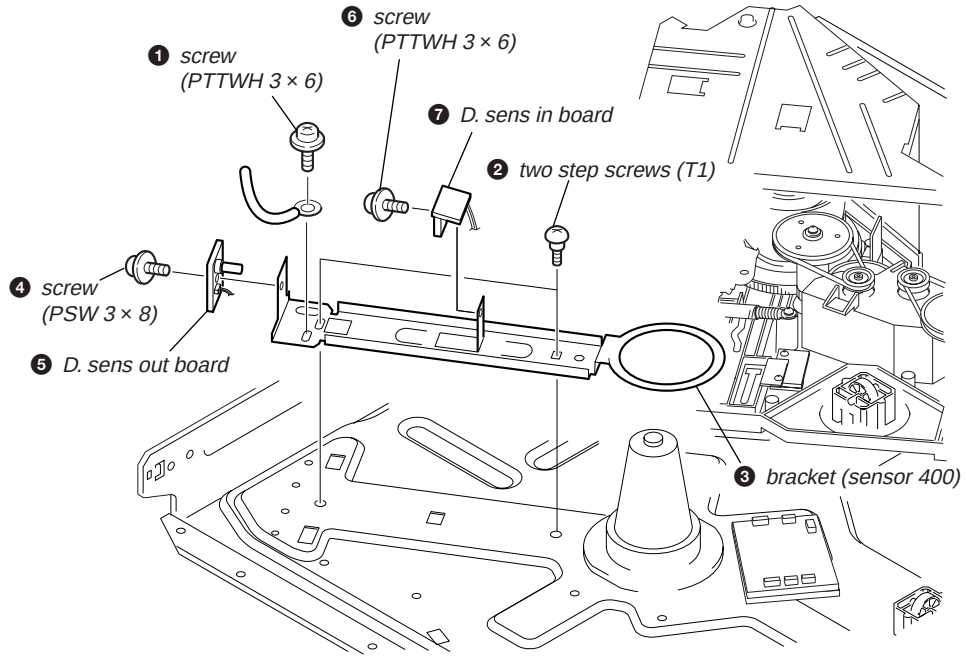
3-12. DC MOTOR (DOOR) (M603)



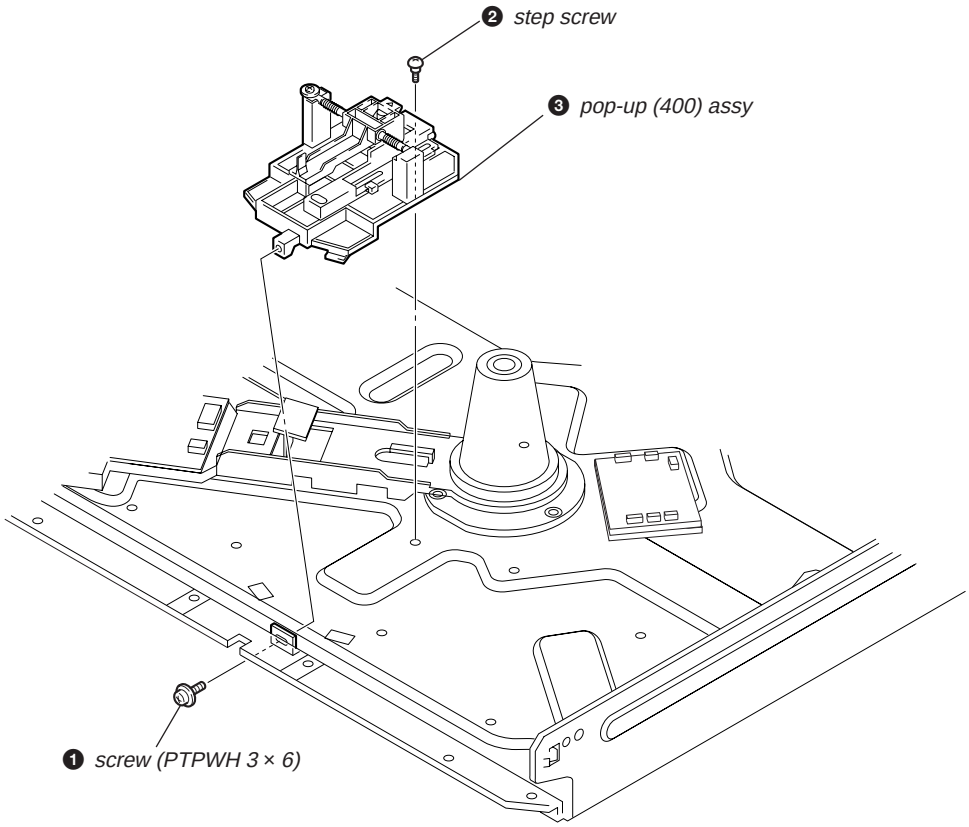
3-13. HOLDER (TABLE SENSOR 400)


❷ connector (CN83)
❶ four screws (BVTP 3 × 8)
❹ sensor board
❺ screw (PTTWH 3 × 6)
❸ two connectors (CN81, CN82)
❻ claw
❻ two claws
❼ holder (table sensor 400)

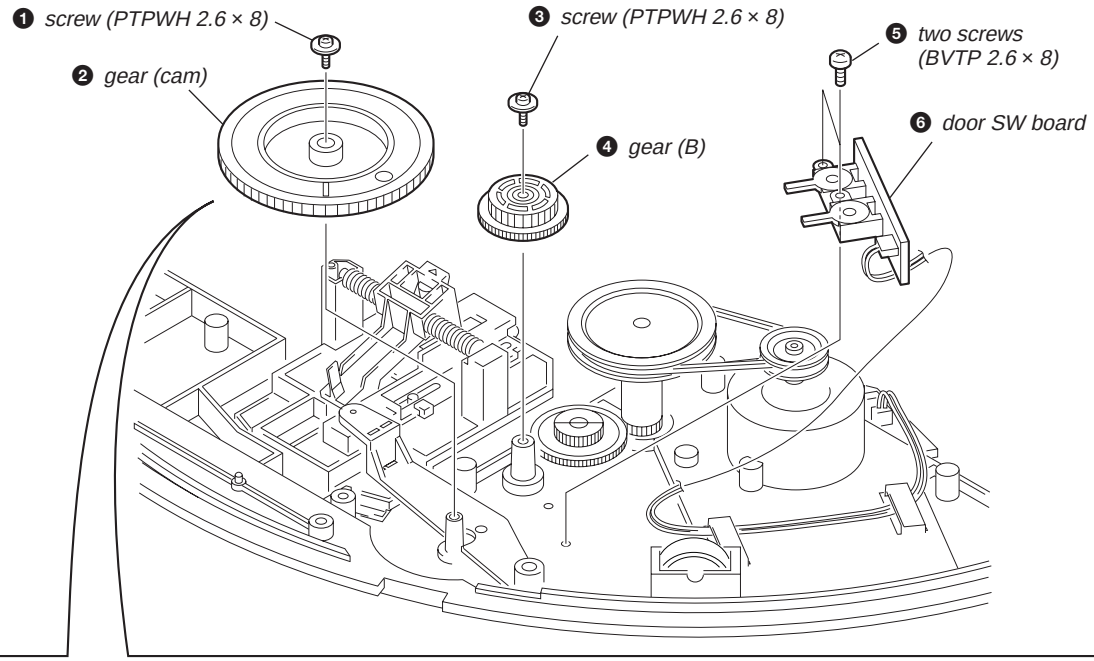
3-14. D. SENS OUT BOARD, D. SENS IN BOARD



3-15. POP-UP (400) ASSY

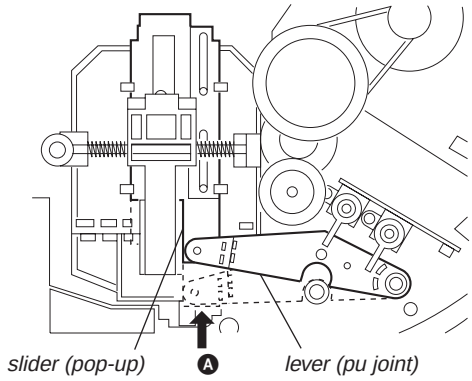


3-16. DOOR SW BOARD

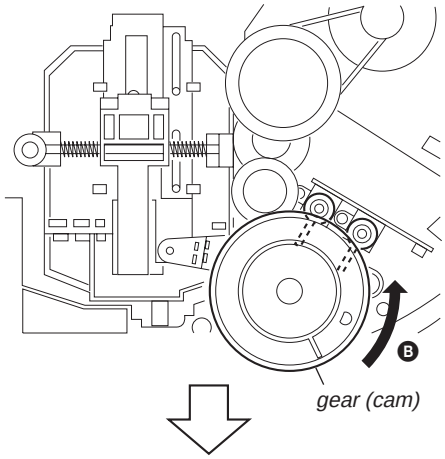


Precaution during the gear (cam) installation

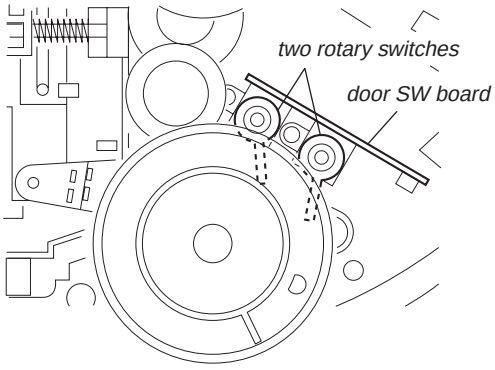
❶ *Move the slider (pop-up) and the lever (pu joint) fully in the direction of the arrow* Ⓐ.



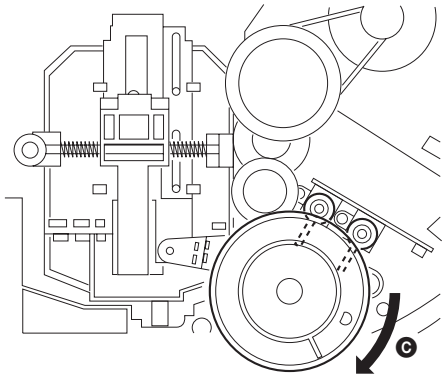
❷ *Install the gear (cam) in the direction shown in the illustration and rotate it fully in the direction of the arrow* Ⓑ.



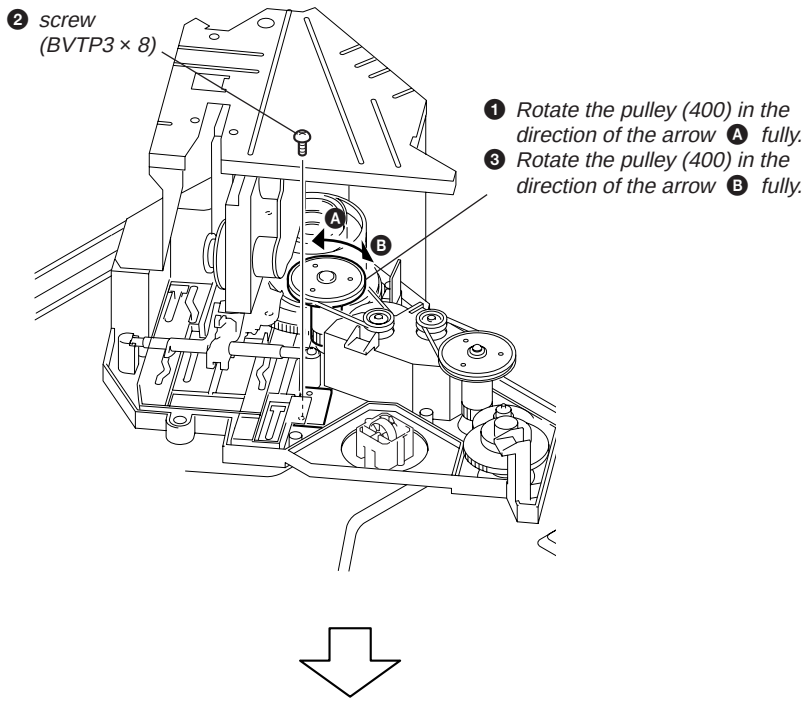
(*The levers of the two rotary switches on the door SW board are shown in the illustration below.*)



❸ *When the gear (cam) happens to go too deep, return it to the original position in the direction of the arrow* Ⓒ.

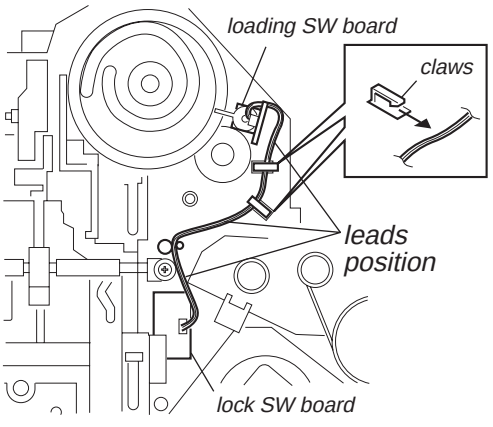


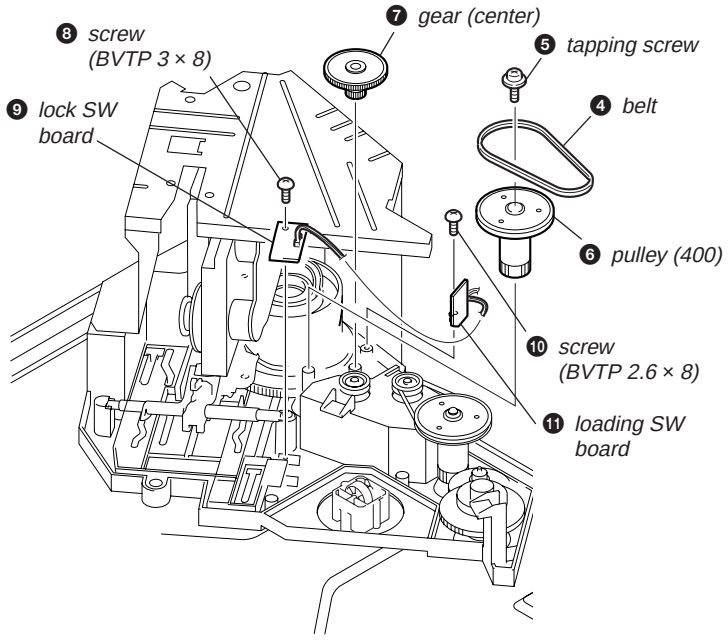
3-17. LOCK SW BOARD, LOADING SW BOARD


❷ screw
(BVTP3 × 8)
❶ Rotate the pulley (400) in the direction of the arrow Ⓐ fully.
❸ Rotate the pulley (400) in the direction of the arrow Ⓑ fully.
Ⓐ
Ⓑ

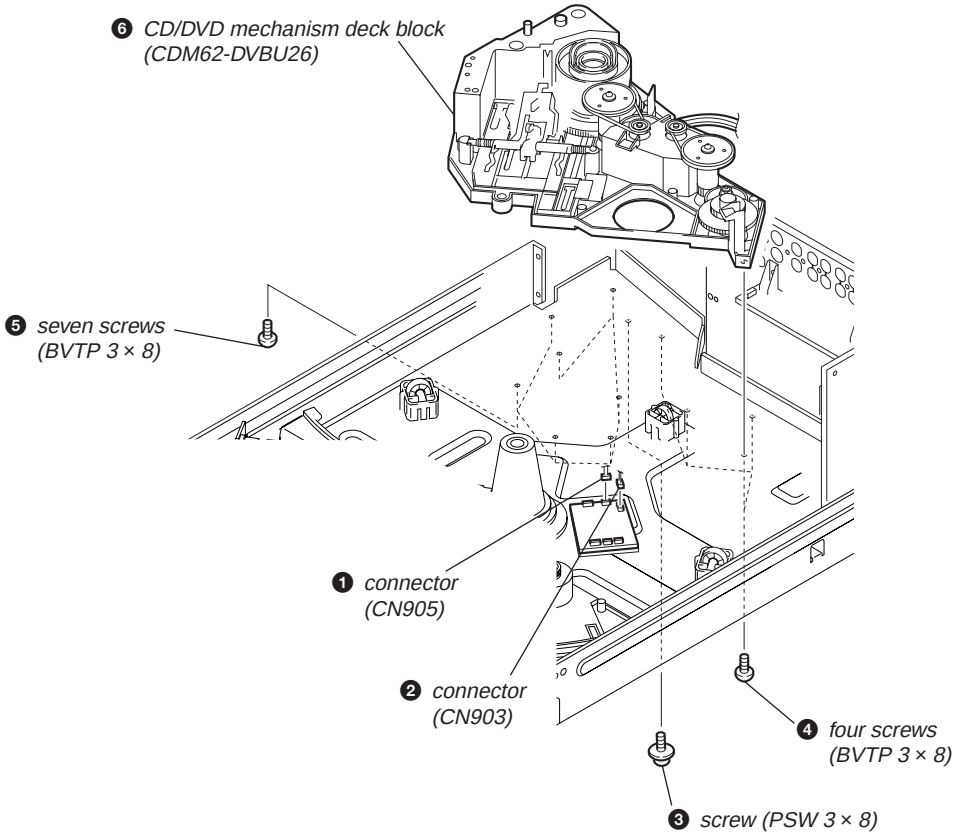
Note for installation

When installing the loading SW board and lock SW boards, align the leads position as shown.

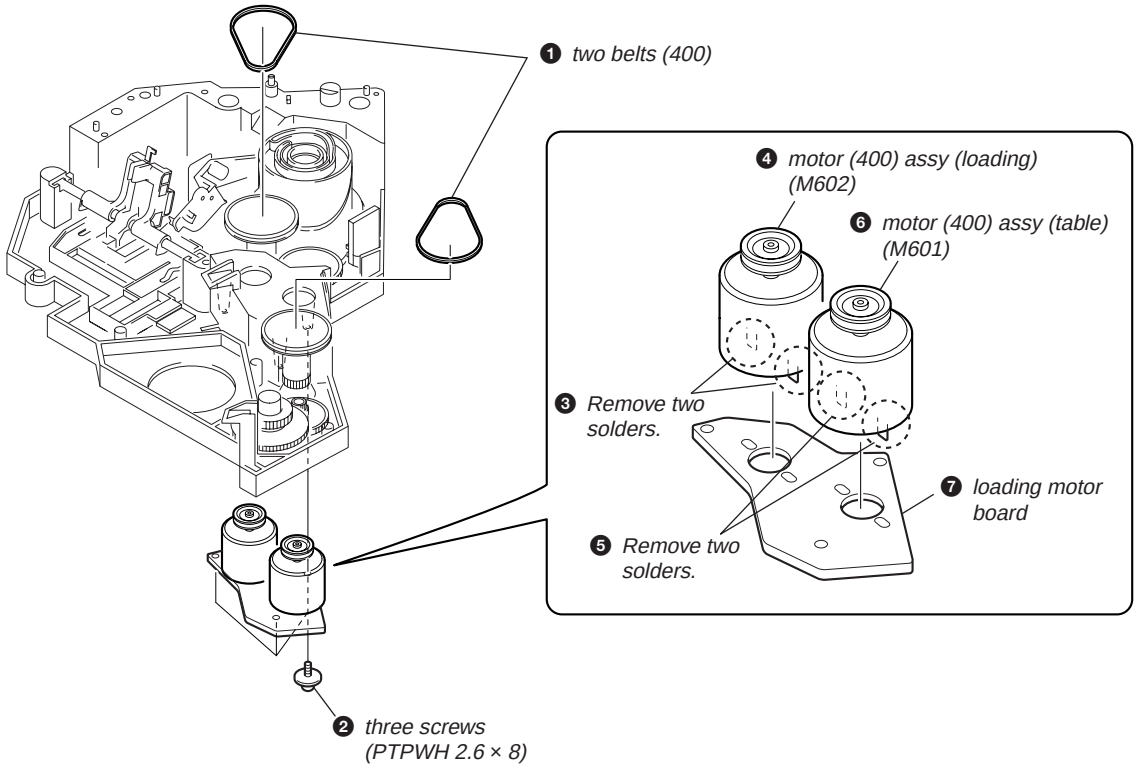




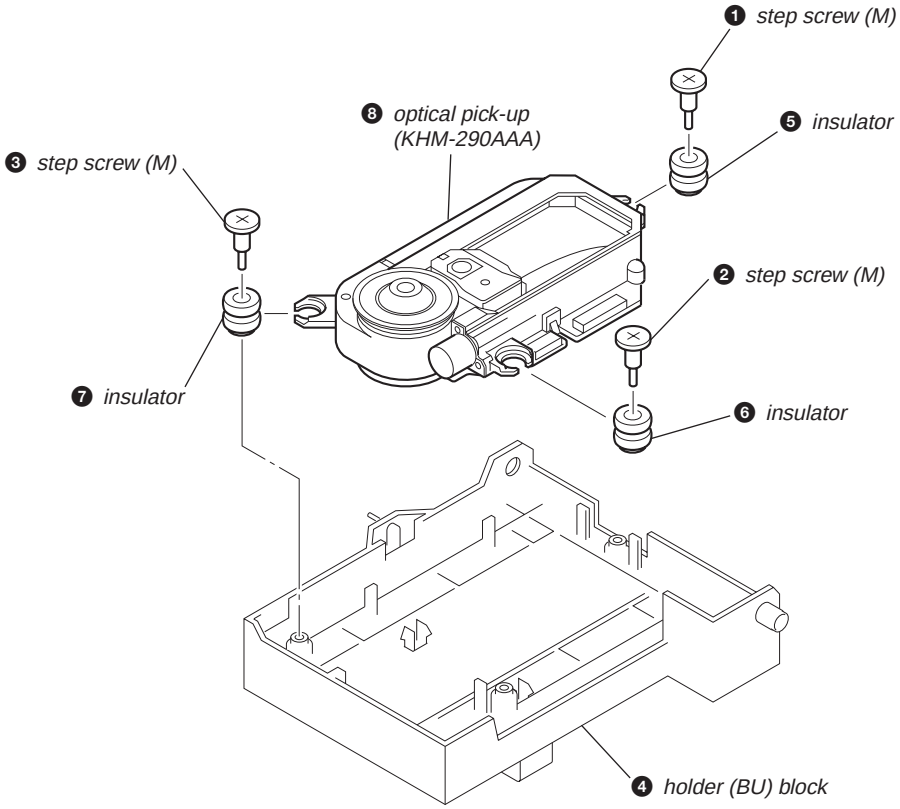
3-18. CD/DVD MECHANISM DECK BLOCK (CDM62-DVBU26)


❻ CD/DVD mechanism deck block (CDM62-DVBU26)
❺ seven screws (BVTP 3 × 8)
❶ connector (CN905)
❷ connector (CN903)
❹ four screws (BVTP 3 × 8)
❸ screw (PSW 3 × 8)

3-19. MOTOR (400) ASSY (LOADING) (M602)/(TABLE) (M601), LOADING MOTOR BOARD


❶ two belts (400)
❹ motor (400) assy (loading) (M602)
❻ motor (400) assy (table) (M601)
❸ Remove two solders.
❼ loading motor board
❺ Remove two solders.
❷ three screws (PTPWH 2.6 × 8)

3-20. OPTICAL PICK-UP (KHM-290AAA)



SECTION 4
TEST MODE

4-1. GENERAL DESCRIPTION

The Test Mode allows you to make diagnosis and adjustment easily using the remote commander and monitor TV. The instructions, diagnostic results, etc. are given on the on-screen display (OSD).

4-2. STARTING TEST MODE

Press the [TOP MENU], [CLEAR], [I/⏻] keys on the remote commander in this order with the power of main unit in OFF status, and the Test Mode starts, then "DIAG START" will be displayed on the fluorescent display tube and the menu shown below will be displayed on the TV screen. At the bottom of menu screen, the model name and revision number are displayed. Last Off at the lower right of screen indicates the information code concerning the last power off. To execute each function, select the desired menu and press its number on the remote commander. To exit from the Test Mode, press the [I/⏻] key.

```
          Test Mode Menu

0. Syscon Diagnosis
1. Drive Auto Adjustment
2. Drive Manual Operation
3. Mecha Aging
4. Emergency History
5. Version Information
6. Video Level Adjustment
                 Exit: POWER Key

Model   :TTX-15xxxx
Revision:x.xxx      Last Off: xx
```

Power Off Information Code List

00: Primary Power Off
01: Power Off Request from SYSTEM CONTROL
02: Power Off by Emergency Power Off Command from SYSTEM CONTROL
(if information is sent from SYSTEM CONTROL)
03: IF CON Judged that SYSTEM CONTROL is Faulty
04: Power Off from Diagnosis Mode of IF CON
05: Forced Power Off by the User
06: Power Off by Power Supply Voltage Monitor

4-3. SYSCON DIAGNOSIS

The same contents as board detail check by serial interface can be checked from the remote commander. On the Test Mode Menu screen, press [0] key on the remote commander, and the following check menu will be displayed.

```
    ### Syscon Diagnosis ###
           Check Menu
0 . Quit
1 . All
2 . Version
3 . Peripheral
4 . Servo
5 . Supply
6 . AV Decoder
7 . Video
8 . Audio
_
```

0. (Quit)

Quit the Syscon Diagnosis and return to the Test Mode Menu.

1. (All items continuous check)

This menu checks all diagnostic items continuously. Normally, all items are checked successively one after another automatically unless an error is found, but at a certain item that requires judgment through a visual check to the result, the following screen is displayed for the key entry.

```
    ### Syscon Diagnosis ###

         Diag All Check
          No. 2 Version

2-3. ROM Check Sum
Check Sum = xxxx



Press NEXT Key to Continue
Press PREV key to Repeat
```

For the ROM Check, the check sum calculated by the Syscon is output, and therefore you must compare it with the specified value for confirmation.
Following the message, press [▶▶I] key to go to the next item, or [I◀◀] key to repeat the same check again.

To quit the diagnosis and return to the Check Menu screen, press [■] or [ENTER] key. If an error occurred, the diagnosis is suspended and the error code is displayed as shown below.

```
    ### Syscon Diagnosis ###


3-2. EEPROM Check
Error 03  : EEPROM Write/Read N
Address   : 00000001
Write Data: 2492
Read Data : 2490
Press NEXT Key to Continue
Press PREV key to Repeat
_
```

Press [■] key to quit the diagnosis, or [⏮] key to repeat the same item where an error occurred, or [⏭] key to continue the check from the item next to faulty item.

* In "All item continuous check", pressing stop or enter will not quit the diagnosis.

Selecting [2] and subsequent items call the submenu screen of each item. When "———" is displayed in the submenu, it means that the test is not supported in the model.

For example, if "5. Supply" is selected, the following submenu will be displayed.

```
    ### Syscon Diagnosis ###
           Check Menu
         No. 5 Supply
0. Quit
1. All
2. ARP Register Check
3. ARP to RAM Data Bus
4. ARP to RAM Address Bus
5. ARP RAM Check
```

0. (Quit)
Quit the submenu and return to the main menu.

1. (All submenu items continuous check.)
This menu checks 2 and subsequent items successively. At the item where visual check is required for judgment or an error occurred, the checking is suspended and the message is output for key entry. Normally, all items are checked successively one after another automatically unless an error is found.
Selecting [2] and subsequent items executes respective menus and outputs the results.
For the contents of each submenu, see "General Description of Checking Method" and "Check Items List".

General Description of Checking Method
2. Version

(2-2) Revision
ROM revision number is displayed.
Error: Not detected.
The revision number defined in the source file is displayed with four digits.

(2-3) ROM Check Sum
Check sum is calculated.
Error: Not detected.
8-bit data are added up to the ROM address 0x000F0000 to 0x002EFFFF, and the result is displayed with 4-digit hexadecimal number. Error is not detected. Compare the result with the specified value.

(2-4) Model Type
Model code is displayed.
Error: Not detected.
The model code read from the EEPROM is displayed with 2-digit hexadecimal number.

(2-5) Region
Region code is displayed.
Error: Not detected.
The region code determined from the model code is displayed.

(2-6) M't Check
Mount resistance is checked.
Error 22: The region code does not accord.
Check whether the region code that is deduced from model resistance and destination resistance accords with the region code that is deduced from region resistance value.

3. Peripheral

(3-2) EEPROM Check
Data write ⟶ read, and accord check
Error 03: EEPROM write/read discord
0x9249, 0x2942 and 0x4294 are written to the address 0x00 to 0xFF of the EEPROM and then read for checking. Before writing, the data are saved, then after checking, they are written to restore the contents of EEPROM.

(3-3) Gate Array Check
Data write → read, and accord check
Error 02: Gate Array write/read discord
Data of 0x00 to 0xFF is written sequentialy to the address 0xF and then read for checking.

(3-4) NAND FLASH Check
Data delete → write → read, and accord check
Error 04: delete error
Error 05: write error
Error 06: read data discord
Error 21: more than ten blocks are defective
Deleting, writing and checking read data are executed to the zeroth block of Flash memory.
If any detective block is found, the address is displayed. When more than ten blocks are defective, it is considered as an error.

(3-5) SACD Check
Device reset ⟶ internal organs RAM check.
Error 50: Write and read data discord.

(3-6) VENC Check
Data write ⟶ read, and accord check
Error 52: Write/read data discord
Error may occur due to defect of access with syscon.

(3-7) ————————
Check no support.

(3-8) EX RAM Check
Test Data write ⟶ read, and accord check
Error 02: The external RAM used in the system control is checked.

4. Servo

(4-2) Servo DSP Check
Data write ⟶ read, and accord check
Error 12: Read data discord
0x9249, 0x2942 and 0x4294 are written to the RAM address 0x602 of the Servo DSP and then read for checking.

(4-3) ————————
Check no support.

(4-4) RF Amp (SSI) W/R Check
Data write ⟶ read, and accord check
Error 13: RF Amp register write, and read data discord
Implement 8-bit shift operation of the 0x01 to the readable/writable register of the RF Amp. If once write data do not accord with read data, it is NG.

5. Data Supply System

(5-2) ARP Register Check
Data write ⟶ read, and accord check
Error 08: ARP register write, and read data discord
Data 0x00 to 0xFF is written sequentially to the ARP TMAX register (address 0xC6) and then read for checking.

(5-3) ARP to RAM Data Bus
Data write ⟶ read, and accord check
Error 09: ARP ⟷ RAM data bus error
Data 0x0001 to 0x8000 where one bit each is set to 1 are written to the address 0 of RAM (IC303) connected to the ARP (IC301) through the bus, then they are read and checked. In case of discord, written bit pattern and read data are displayed. If data where multiple bits are 1 are read, the bits concerned may touch each other. Further, if data where certain bit is always 1 or 0 regardless of written data, the line could be disconnected or shorted.

(5-4) ARP to RAM Address Bus
Data write ⟶ other address read discord check
Error 10: ARP ⟷ RAM address bus error
Caution: Address and data display in case of an error is different from the display of other diagnosis (described later).
Before starting the test, all addresses of RAM (IC303) are cleared to 0x0000.
First, 0xA55A is written to the address 0x00000, and the address data are read and checked from addresses 0x00001 to 0x80000 while shifting 1 bit each. Next, the data at that address is cleared, and it is written to the address 0x00001, and read and checked in the same manner. This check is repeated up to the address 0x80000 while shifting the address data by 1 bit each.
If data other than 0 is read at the addresses except written address, an error is given because all addresses were already cleared to 0. In this check, the error display pattern is different from that of other diagnosis; read data, written address, and read address are displayed in this order. However, the message uses same template, and accordingly exchange Address and Data when reading. The following display, for example,

```
    ### Syscon Diagnosis ###



5-4. ARP to RAM Address Bus
Error 10: ARP - RAM Address B
Address       : 0000A55A
Write Data    : 00000000
Read Data     : 00080000
Press NEXT Key to Continue
Press PREV key to Repeat
_
```

shows the data 0xA55A was read from address 0x00080000 though it was written to the address 0x00000000. This implies that these addresses are in the form of shadow. Also, if the read data is not 0xA55A, another error will be present.

(5-5) ARP RAM Check
Data write ⟶ read, and accord check
Error 11: ARP RAM read data discord
The program code data stored in ROM are copied to all areas of RAM (IC303) connected to the ARP (IC301) through the bus, then they are read and checked if they accord. If the detail check was selected initially, the data are written to all areas and read, then the same test is conducted once again with the data where all bits are inverted between 1 and 0. If discord is detected, faulty address, written data, and read data are displayed following the error code 11, and the test is suspended.

6. AV Decoder

(6-2) 1935 RAM
Data write ⟶ read, and accord check
Error 14: AVD RAM read data discord
The program code data stored in ROM (IC106) are copied to all areas of RAM (IC404, 405) connected to the AVD (IC403) through the bus, then they are read and checked if they accord. Further, the same test is conducted once again with the data where all bits are inverted between 1 and 0. If discord is detected, faulty address, written data, and read data are displayed following the error code 14, and the test is suspended.
During the test, OSD display becomes blank as the OSD area is also checked.

(6-3) 1935 SP
ROM ⟶ AVD RAM ⟶ Video OUT
Error: Not detected.
The data including sub picture streams in ROM (IC106) are transferred to the RAM (IC404, 405) in AVD (IC403), and output as video signals from the AVD (IC403).
Though OSD display becomes blank, the output of video signals continues until the key is pressed.

7. Video Output

(7-2) Color Bar
AVD color bar command write ⟶ Video OUT
Error: Not detected.
The command is transferred to the AVD, and the color bar signals are output from video terminals.

(7-3) Composite Out
AVD color bar command write ⟶ Video (Composite, Y/C) OUT
Error: Not detected.
The command is transferred to the AVD, and the color bar signals are output from video terminals.

(7-4) Y/C Out
AVD color bar command write → Video (Composite, Y/C) OUT
Error: Not detected.
The command is transferred to the AVD, and the color bar signals are output from video terminals.
They are output from all video terminals (Composite, Y/C, Component).

(7-5) ————
Check no support.

(7-6) Component Out
AVD color bar command write ⟶ Video (Component, Y/C) OUT
Error: Not detected.
The command is transferred to the AVD, and the color bar signals are output from video terminals.

(7-7) ————
Check no support.

8. Audio Output

(8-2) ARP ⟶ 1935
Data flow from supply system DRAM to SDRAM of AV Decoder is tested.
Error 15: ARP ⟶ 1935 video NG
16: ARP ⟶ 1935 audio NG

(8-3) ————
Check no support.

(8-4) Test Tone
Pink noise output
Error: Not detected.
In the models without DD output, the test tone is output from L and R of 2-channel only, and in the models with DD output, the test tone is output from L and R of 2-channel, and all channels of 5.1 output.
After turning on all outputs, each time the ▶▶I key is pressed, the output channel is switched for individual channel checking.

Diagnosis Check Items List

2. Version Display
(2-2) Revision
(2-3) ROM Check Sum
(2-4) Model Type
(2-5) Region
(2-6) M't Check

3. Peripheral
(3-2) EEPROM Check
(3-3) Gate Array Check
(3-4) NAND FLASH Check
(3-5) SACD Check
(3-6) VENC Check
(3-7) ———— (Function not supported)
(3-8) EX RAM Check

4. Servo
(4-2) Servo DSP Check
(4-3) ———— (Function not supported)
(4-4) RF Amp (SSI) W/R Check

5. Data Supply System
(5-2) ARP Register Check
(5-3) ARP to RAM Data Bus
(5-4) ARP to RAM Address Bus
(5-5) ARP RAM Check

6. AV Decoder
(6-2) 1935 RAM
(6-3) 1935 SP

7. Video Output
(7-2) Color Bar
(7-3) Composite Out
(7-4) Y/C Out
(7-5) ———— (Function not supported)
(7-6) Component Out
(7-7) ———— (Function not supported)

8. Audio Output
(8-2) ARP ⟶ 1935
(8-3) ———— (Function not supported)
(8-4) Test Tone

Error Codes List

00: Error not detected
01: RAM write/read data discord
03: EEPROM NG
04: Flash memory clear error
05: Flash memory write error
06: Flash memory read data discord
08: ARP register read data discord
09: ARP ←→ RAM data bus error
10: ARP ←→ RAM address bus error
11: ARP RAM read data discord
12: Servo DSP NG
13: RF Amp NG
14: 1935 SDRAM NG
15: ARP → 1935 video NG
16: ARP → 1935 audio NG
1A: System call error (Function not supported)
1B: System call error (Parameter error)
1C: System call error (Illegal ID number)
20: System call error (Time out)
22: Resistor installation error
50: SACD Decoder W/R NG
52: Video Encoder W/R NG
55: External RAM W/R NG
90: Error occurred
91: User verification NG
92: Diagnosis cancelled

4-4. DRIVE AUTO ADJUSTMENT

DVD reference disc
Single Layer
HLX-503 (J-6090-069-A) (NTSC) OR
HLX-504 (J-6090-088-A) (NTSC)
Dual Layer
HLX-501 (J-6090-071-A) (NTSC) OR
HLX-505 (J-6090-089-A) (NTSC)

CD reference disc
YEDS-18 (3-702-101-01) OR
PATD-012 (4-225-203-01)

On the Test Mode Menu screen, press [1] key on the remote commander, and the drive auto adjustment menu will be displayed.

```
  ## Drive Auto Adjustment ##

        Adjustment Menu

0. ALL
1. DVD-SL
2. CD
3. DVD-DL
4. LCD

_

                    Exit: RETURN
```

Normally, [0] is selected to adjust DVD (single layer), CD, and DVD (dual layer) in this order. But, individual items can be adjusted for the case where adjustment is suspended due to an error. In this mode, the adjustment can be made easily through the operation following the message displayed on the screen. Which disc is currently adjusted is displayed on the fluorescent display tube.

0. ALL

You will be asked if EEPROM data are initialized or not, and for this prompt, select [0] and press the [ENTER] key. First, the servo setting data in EEPROM, Emergency History and Hour Meter are cleared to initialize. Then, [1] DVD-SL disc, [2] CD disc, and [3] DVD-DL disc are adjusted in this order. Because the changer model can accept multiple discs in advance of adjustment, adjustments can be continued by exchanging discs automatically whenever an adjustment is completed following the instruction on screen. You can exit the adjustment by pressing the [■] button. In adjusting each disc, the mirror time is measured to check the disk type. In the auto adjustment, whether the disc type is correct is not checked unlike conventional models, and accordingly, take care not to insert a different type of disc.

Three kinds of discs can be set in advance. In this case, set discs in order to the displayed number with following the massage. Every time after adjusting a disc, the disc is replaced and adjustment is continued automatically.

Set Disc
Disc slot number 1: DVD-SL
Disc slot number 2: CD
Disc slot number 3: DVD-DL

1. DVD Single Layer Disc

Select [1], insert DVD single layer disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM. The disc slot No. 1 is used in the changer type model. If there is no disc on the disc slot No. 1, the tray will be open to wait for closing. If there is a disc on the table, the adjustment starts immediately. If you put a disc prior to adjustment, confirm that the SL disc is set on the disc slot 1.

DVD Single Layer Disc Adjustment Steps

1. Sled Reset
2. Disc Check Memory SL
3. Set Disc Type SL
4. Spindle Start
5. Laser Diode ON
6. Focus Error Check
7. Focus ON 0 with PI Level measure
8. Auto Track Offset Adjust L0
9. Try Level Check
10. Tracking ON
11. CLVA ON
12. Sled ON
13. Auto Focus Balance Adjust
14. Auto Loop Filter Offset Adjust
15. Auto Focus Gain Adjust L0
16. Auto Focus Balance Adjust L0
17. EQ Boost Adjust
18. Auto Loop Filter Offset Adjust
19. Auto Track Gain Adjust
20. RF Level Measure
21. Jitter measure
22. Eep Copy Loop Filter Offset
23. All Servo Off

2. CD Disc

Select [2], insert CD disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM. The disc slot No. 2 is used in the changer type model. If there is no disc on the disc slot No. 2, the tray will be open to wait for closing. If there is a disc on the table, the adjustment starts immediately. If you put a disc prior to adjustment, confirm that the CD is set on the disc slot 2.

CD Adjustment Steps

1. Sled Reset
2. Disc Check Memory CD
3. Set Disc Type CD
4. Spindle Start
5. Laser Diode ON
6. Focus Error Check
7. Focus ON 0 with PI Level measure
8. Auto Track Offset Adjust L0
9. Try Level Check
10. Tracking ON
11. CLVA ON
12. Sled ON
13. Auto Focus Balance Adjust
14. Auto Loop Filter Offset Adjust
15. Auto Focus Gain Adjust L0
16. Auto Focus Balance Adjust L0
17. EQ Boost Adjust
18. Auto Loop Filter Offset Adjust
19. Auto Track Gain Adjust
20. Copy Adjustment Data to LCD
21. RF Level Measure
22. Jitter measure
23. All Servo Off

3. DVD Dual Layer Disc

Select [3], insert DVD dual layer disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM. The disc slot No. 3 is used in the changer type model. If there is no disc on the disc slot No. 3, the tray will be open to wait for closing. If there is a disc on the table, the adjustment starts immediately. If you put a disc prior to adjustment, confirm that the DL disc is set on the disc slot 3.

DVD Dual Layer Disc Adjustment Steps

1. Sled Reset
2. Disc Check Memory DL
3. Set Disc Type DL
   DVD DL Layer 1 Adjust
4. Spindle Start
5. Laser Diode ON
6. Focus ON 0 with PI Level measure
7. Auto Track Offset Adjust L1
8. Tracking ON
9. ClVA ON
10. Sled ON
11. Auto Focus Balance Adjust
12. Auto Loop Filter Offset Adjust
13. Auto Focus Gain Adjust L1
14. EQ Boost Adjust L1
15. Auto Track Gain Adjust L1
16. Jitter measure
    DVD DL Layer 0 Adjust
17. Focus Jump (L1 → L0)
18. Auto Track Offset Adjust L0
19. Tracking ON
20. ClVA ON
21. Sled ON
22. Auto Focus Balance Adjust
23. Auto Focus Gain Adjust L0
24. Auto Focus Balance Adjust L0
25. EQ Boost Adjust L0
26. Auto Track Gain Adjust L0
27. Jitter measure
28. All Servo Stop

4. LCD

LCD disc is not adjusted because the adjusted data of CD are reflected, and SACD (hybrid disc) is not adjusted because the adjusted data of CD and DVD-DL are reflected.

4-5. DRIVE MANUAL OPERATION

On the Test Mode Menu screen, select [2], and the manual operation menu will be displayed. For the manual operation, each servo on/off control and adjustment can be executed manually.

```
  ## Drive Manual Operation ##
         Operation Menu
1. Disc type
2. Servo Control
3. Track/Layer Jump
4. Manual Adjustment
5. Auto Adjustment
6. Memory Check
7. Changer Manual Move
8. Changer Mecha Check
0. Disc Check Memory
_
                      Exit: RETURN
```

In using the Manual Operation menu, take care of the following points. These commands do not provide protection, thus requiring correct operation. The sector address or time code field is displayed when a disc is loaded.

1. Set correctly the disc type to be used on the Disc Type setting screen.
   The Disc Type setting must be performed after a disc was loaded.
   The set Disc Type is cleared when the tray is opened.
2. After power ON, if the Manual Operation was selected, first perform "Reset SLED TILT" by opening 1. Disc Type screen.
3. In case of an alarm, immediately press the [■] button to stop the servo operation, and turn the power OFF.

Basic operation (controllable from front panel or remote commander)

[I/⏻]	: Power OFF
[■]	: Servo stop
[⏏] (DISC EJECT)	: Stop+Eject/Loading
[↩] (RETURN)	: Return to Operation Menu or Test Mode Menu
[▶▶I] , [I◀◀]	: Transition between sub modes of menu
[1] to [9], [0]	: Selection of menu and items
Cursor [↑]/[↓]	: Increase/Decrease in manually adjusted value

0. Disc Check Memory

```
           Disc Check


1. SL Disc Check
2. CD Disc Check
3. DL Disc Check




0. Reset SLED TILT
_
```

On this screen, the mirror time is measured and written to the EEPROM to check the disc type. First, set a DVD SL disc and press [1], then set a CD disc and press [2], and finally set a DVD DL disc and press [3]. The measured mirror time is displayed respectively.
The adjustment must be executed more than once after default data were written.
From this screen, you can go to another mode by pressing [▶▶I] or [I◀◀] key, but you cannot enter this mode from another mode. You can enter this mode from the Operation Menu screen only.

1. Disc Type

```
           Disc Type
1. Disc Type Auto Check
2. DVD SL  12cm
3. DVD DL  12cm
4. CD      12cm
5. LCD     12cm
6. DVD SL  8cm
7. DVD DL  8cm
8. CD      8cm
9. LCD     8cm
0. Reset SLED TILT
_                          EMG. 00
   0. Reset SLED TIL
```

On this screen, select the disc type. To select the disc type, press the number of the loaded disc. The selected disc type is displayed at the bottom. Selecting [1] automatically selects and displays the disc type. In case of wrong display, retry "Disc Check Memory". Also, opening the tray causes the set disc type to be cleared. In this case, set the disc type again after loading.
In performing manual operation, the disc type must be set.

Once the disc type has been selected, the sector address or time code display field will appear as shown below. These values are displayed when PLL is locked.

```
           Disc Type
1. Disc Type Auto Check
2. DVD SL   12cm
3. DVD DL   12cm
4. CD       12cm
5. LCD      12cm
6. DVD SL   8cm
7. DVD DL   8cm
8. CD       8cm
9. LCD      8cm
0. Reset SLED TILT
_         SA.------ SI.-- EMG.00
DVD SL      12cm        Jitter FF
```

Display when DVD SL 12cm disc was selected

```
           Disc Type
1. Disc Type Auto Check
2. DVD SL   12cm
3. DVD DL   12cm
4. CD       12cm
5. LCD      12cm
6. DVD SL   8cm
7. DVD DL   8cm
8. CD       8cm
9. LCD      8cm
0. Reset SLED TILT
_            TC.--:--:-- EMG.00
CD          12cm        Jitter FF
```

Display when CD 12cm disc was selected

[0] Reset SLED TILT : Reset the Sled and Tilt to initial position. (Reset the Sled only to initial position because the Tilt mechanism is not available in this model.)

[1] Disc Type Check : Judge automatically the loaded disc. As the judged result is displayed at the bottom of screen, make sure that it is correct. If Disc Check Memory menu has not been executed after EEPROM default setting, the disc type cannot be judged. In this case, return to the initial menu and make a check for three types of discs (SL, DL, CD).

[2] to [9] : Select the loaded disc. The adjusted value is written to the address of selected disc. No further entry is necessary if [1] was selected.

2. Servo Control

```
          Servo Control
1. LD          Off  R. Sled FWD
2. SP          Off  L. Sled REV
3. Focus       Off
4. TRK.        Off
5. Sled        Off
6. CLVA        Off
7. FCS. Srch   Off


0. Reset SLED TILT
_          SA.------ SI.-- EMG.00
DVD SL         12cm     Jitter FF
```

On this screen, the servo on/off control necessary for replay is executed. Normally, turn on each servo from 1 sequentially and when CLVA is turned on, the usual trace mode becomes active. In the trace mode, DVD sector address or CD time code is displayed. This is not displayed where the spindle is not locked.
The spindle could run overriding the control if the spindle system is faulty or RF is not present. In such a case, do not operate CLVA.

[0] Reset SLED TILT : Reset the Sled and Tilt to initial position. (Reset the Sled only to initial position because the Tilt mechanism is not available in this model.)

[1] LD : Turn ON/OFF the laser.

[2] SP : Turn ON/OFF the spindle.

[3] Focus : Search the focus and turn on the focus.

[4] TRK. : Turn ON/OFF the tracking servo.

[5] Sled : Turn ON/OFF the sled servo. When PLL is not locked (cannot be locked), the sled servo is not turned ON. The display keeps OFF.)

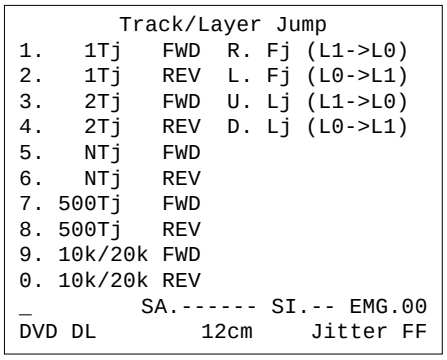
[6] CLVA : Turn ON/OFF normal servo of spindle servo.

[7] FCS. Srch : Apply same voltage as that of focus search to the focus drive to check the focus drive system.

→ Sled FWD : Move the sled outward. Perform this operation with the tracking servo turned off.

← Sled REV : Move the sled inward. Perform this operation with the tracking servo turned off.

3. Track/Layer Jump

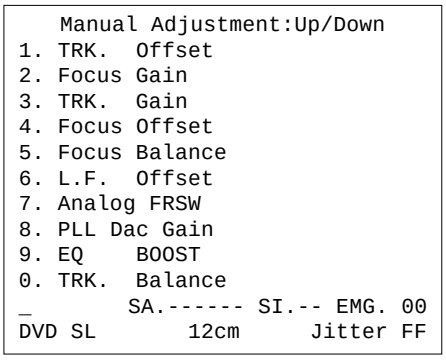

Track/Layer Jump
1. 1Tj FWD R. Fj (L1->L0)
2. 1Tj REV L. Fj (L0->L1)
3. 2Tj FWD U. Lj (L1->L0)
4. 2Tj REV D. Lj (L0->L1)
5. NTj FWD
6. NTj REV
7. 500Tj FWD
8. 500Tj REV
9. 10k/20k FWD
0. 10k/20k REV
SA.------ SI.-- EMG.00
DVD DL 12cm Jitter FF

On this screen, track jump, etc. can be performed. Only for the DVD-DL, the focus jump and layer jump are displayed in the right field.

[1] 1Tj FWD : 1-track jump forward.
[2] 1Tj REV : 1-track jump reverse.
[3] 2Tj FWD : 2-track jump forward.
[4] 2Tj REV : 2-track jump reverse.
[5] NTj FWD : N-track jump forward.
[6] NTj REV : N-track jump reverse.
[7] 500Tj FWD : Fine search forward.
[8] 500Tj REV : Fine search reverse.
[9] 10k/20k FWD : Direct search forward.
[0] 10k/20k REV : Direct search reverse.

– The following commands are valid for DVD-DL disc only –
[→] (L1 → L0): Focus jump (Trk/Sled Servo OFF) forward.
[←] (L0 → L1): Focus jump (Trk/Sled Servo OFF) reverse.
[↑] (L1 → L0): Layer jump (Trk/Sled Servo ON) forward.
[↓] (L0 → L1): Layer jump (Trk/Sled Servo ON) reverse.

4. Manual Adjustment



On this screen, each item can be adjusted manually. Select the desired number [1] to [0] from the remote commander, and current setting for the selected item will be displayed, then increase or decrease numeric value with [↑] key or [↓] key. This value is stored in the EEPROM. If CLV has been applied, the jitter is displayed for reference for the adjustment.

[1] TRK. Offset : Adjusts tracking offset.
[2] Focus Gain : Adjusts focus gain.
[3] TRK. Gain : Adjusts track gain.
[4] Focus Offset : Adjusts focus offset.
[5] Focus Balance : Adjusts focus balance.
[6] L.F. Offset : Adjusts loop filter offset.
[7] Analog FRSW : Sets select switch of analog feedback circuit.
[8] PLL Dac Gain : Adjusts D/A converter gain of PLL.
[9] EQ BOOST : Adjusts boost amount of equalizer.
[0] TRK. Balance : Adjusts tracking balance.

5. Auto Adjustment

```
        Auto Adjustment
1. Auto TRK.  Offset
2. Auto FCS Balance
3. Auto Focus Offset
4. Auto Focus Gain
5. Auto TRK.  Gain
6. Auto EQ.
7. Auto L.F.  Offset
8. Auto Group Delay
9. Auto TRK.  Balance

_         SA.------ SI.-- EMG.00
DVD SL        12cm    Jitter FF
```

On this screen, each item can be adjusted automatically. Select the desired number [1] to [8] from the remote commander, and selected item is adjusted automatically.

[1] Auto TRK. Offset : Adjusts tracking offset.
[2] Auto FCS Balance : Adjusts focus balance.
[3] Auto Focus Offset : Adjusts focus offset.
[4] Auto Focus Gain : Adjusts focus gain.
[5] Auto TRK. Gain : Adjusts track gain.
[6] Auto EQ : Adjusts EQ.
[7] Auto L.F. Offset : Adjusts loop filter offset.
[8] Auto Group Delay : Adjusts amount of group delay.
[9] Auto TRK. Balance : Adjusts tracking balance.

6. Memory Check

The display image is shown below and three screens in total can be selected.

```
EEPROM Data 1          -- DL --
             CD  LCD SL  L0  L1
Focus Gain   xx  xx  xx  xx  xx
TRK.  Gain   xx  xx  xx  xx  xx
FCS Balance  xx  xx  xx  xx  xx
Focus Bias   xx  xx  xx  xx  xx
TRV.  Offset xx  xx  xx  xx  xx
L.F.  Offset xx  xx  xx  xx  xx
EQ.   Boost  xx  xx  xx  xx  xx

_ UP    : Last Data
  DOWN  : Next Data
  CLEAR : Default Set   page.1/3
```

```
EEPROM Data 2          -- DL --
             CD  LCD SL  L0  L1
RF  Jitter   xx  --  xx  xx  xx
RF  Level    xx  --  xx  --  --
FE  Level    xx  --  xx  --  --
FE Balance   xx  --  xx  --  --
TRV.Level    xx  --  xx  --  --
TE  Gain     xx  xx  --  --  --
PI  Level    xx  --  xx  xx  --

_ UP    : Prev Data
  DOWN  : Next Data
  CLEAR : Default Set   page.2/3
```

```
EEPROM Data 3          -- DL --
             CD  LCD SL  L0  L1
Analog FRSW  xx  xx  xx  xx  xx
PLL Dac Gain xx  xx  xx  xx  xx
Mirror Time  xx  xx  xx  xx  xx
TRK. Balance xx  xx  xx  xx  xx

  THR A&L :  xx  xx xx/xx xx xx


_ UP    : Prev Data
  DOWN  : First Data
  CLEAR : Default Set   page.3/3
```

On this screen, current servo adjusted data stored in the EEPROM are displayed. The adjusted data are initialized by pressing the [CLEAR] key, but be careful that they are not recoverable after initialization.
Before clearing the adjusted data, make a note of the set data. This screen will also appear if [0] All is selected in the Drive Auto Adjustment. In this case, default setting cannot be made.
"THR A&L" data on the third page cannot be changed if default setting is once made.

7. Changer Manual Move

On this test mode screen, selecting [7] enables the machine operation such as disc loading. The following screen appears.

Display when [7] is selected in the Drive Manual Operation

```
   ## Changer Manual Move ##
ENTER  : Mecha Initial
PLAY   : Loading In
STOP   : Loading Out
OP/CL  : Door Open/Close
UP     : Poper Up
DOWN   : Poper Down
jogFOR : Table R StepTurn
jogPRV : Table L StepTurn
DISP   : Sensor Status

_
RETURN : Exit
```

[ENTER] : Performs initialization of mechanism.
Mecha Initial — Because the mechanical initialization is performed when the machine enters the Drive Manual Operation mode, use this item when an error such as adjustment error occurs.

[PLAY] : Loads the disc from the chucking position of the T. table toward inside the MD.
Loading In — When the Disc Load is selected, a series of operation starting from Loading – Chucking is performed.

[STOP] : Moves the disc from inside the MD to the T. table.
Loading Out — When the Disc Unload is selected, a series of operation starting from Unloading – Chucking is performed.

[OP/CL] : Opens and closes the door.
Door Open/Close

[UP] : Pops up the lever.
Poper Up

[DOWN] : Pops down the lever.
Poper Down

[jog FOR] : Moves the T. table to the right in units of the slit.
Table R step Turn — The T. table number is incremented in the direction of positive (+) number.

[jog PRV] : Moves the T. table to the left in units of the slit.
Table L step Turn — The T. table number is decremented in the direction of negative (–) number.

[DISP] : When this item is selected, the 400CHG Sensor Check appears on the screen.
Sensor Status

[RETURN] : Returns to the Operation Menu.
Exit

Display when the Sensor Status is selected in the Changer Manual Move.

```
   ## 400CHG Sensor Check ##
 Table 1/2/3/4    : X/X/X/X
 Table lock       : X
 Load in          : X
 Load out         : X
 Door open        : X
 Door close       : X
 Poper up         : X
 Poper down       : X
 Disc Sensor      : XXX

_
RETURN : Exit
```

Table 1/2/3/4 : Indicates table sensor 1/2/3/4 status.
(1 : High , 2 : Low)

Table lock
Load in/out
Door open/close
Poper up/down
: Indicates each switch status.
(1 : On , 2 : Off)

Disc Sensor : Indicates sensitivity of the disc sensor.
The value is raging from 0 to 3FF.

8. Changer Mecha Check

On this test mode screen, selecting [8] enables the table sensor and the disc sensor adjustment. The following screen appears.

Display when [8] is selected in the Drive Manual Operation

```
   ## Changer Mecha Check ##
ENTER  : Mecha Initial
OP/CL  : Disc Load/UnLoad
jogFOR : Table R StepTurn
jogPRV : Table L StepTurn

PLAY   : Table Rotate
PAUSE  : Mecha Adjust
DISP   : Sensor Status


_
RETURN : Exit
```

All operations are the same as those of the Changer Manual Move except [OP/CL], [PLAY] and [PAUSE].

[OP/CL] Disc Load/UnLoad : Loads the disc from the chucking position of the T.table toward inside the MD or from inside the MD to the T.table.
When the Disc Load is selected a series of operation starting from Door Close – T.table Rotate – Chucking is performed.
When the Disc UnLoad is selected a series of operation starting from Unchucking – T.table Rotate – Door Open is performed.

[PLAY] Table Rotate : Enters the Disc Sensor Adjustment Mode. (Refer to the "5. Mechanical Adjustments" (page 45))
The 400CHG Table Rotate appears on the screen.

[PAUSE] Mecha Adjust : Enters the Table Sensor Adjustment Mode. (Refer to the "5. Mechanical Adjustments" (page 45))
The 400CHG Mecha Adjust appears on the screen.

Display when [PLAY] is selected in the Changer Mecha Check.

```
   ## 400CHG Table Rotate ##
 RIGHT : Turn Right
 LEFT  : Turn Left

 Table 1/2/3/4    : X/X/X/X
 Disc Sensor      : XXX




RETURN : Exit
```

[RIGHT] Turn Right : Rotates T.table anti clock wise.

[LEFT] Turn Left : Rotates T.table clock wise.

Table 1/2/3/4 Disc Sensor : These items are the same as those of the 400CHG Sensor Check.

Display when [PAUSE] is selected in the Changer Mecha Check.

```
   ## 400CHG Mecha Adjust ##
 UP    : Load in
 DOWN  : Load out
 RIGHT : Pop Up
 LEFT  : Pop Down

 Table 1/2/3/4    : X/X/X/X




RETURN : Exit
```

[UP] Load in : Loads the disc from the chucking position of the T.table toward inside the MD during pressing [UP].

[DOWN] Load out : Loads the disc from inside the MD to the T.table during pressing [DOWN].

[RIGHT] Pop Up : Pops up the lever.

[LEFT] Pop Down : Pops down the lever.

Table 1/2/3/4 : This item is the same as that of the 400CHG Sensor Check.

4-6. MECHA AGING

The mechanism aging is not supported.

4-7. EMERGENCY HISTORY

```
      ### EMG. History ###

Laser Hours CD          xxh xxm
            DVD         xxh xxm

1. 00 00 00 00    00 00 00 00
   00 00 00 00    00 00 00 00

2. 00 00 00 00    00 00 00 00
   00 00 00 00    00 00 00 00

_
Select : 1-9   Scroll : UP/DOWN
(1: Last EMG.)   Exit : RETURN
```

On the Test Mode Menu screen, selecting [4] displays the information such as servo emergency history. The history information from last "1" up to "10" can be scrolled with [↑] key or [↓] key. Also, specific information can be displayed by directly entering that number with the ten-key pad from [1] to [9].
The upper two lines display the laser ON total hours. Data below minutes are omitted.

Clearing History Information

◎ Clearing laser hours
Press [DISPLAY] and [CLEAR] keys in this order.
Both CD and DVD data are cleared.

◎ Clearing emergency history
Press [TOP MENU] and [CLEAR] keys in this order.

◎ Initializing setup data
Press [MENU] and [CLEAR] keys in this order.
The data have been initialized when "Set Up Initialized" message is displayed.
The EMG. History display screen will be restored soon.

4-8. VERSION INFORMATION

```
  ### Version Information ###

IF con.    Ver:x.xxx(xxxx)
        Group    xx

SYScon.    Ver:x.xxx(xxxx)
        Model    xx
        Region   0x

Servo DSP Ver: x.xxx
AVD ucode Ver: xxxxxxxx

                    Exit : RETURN
```

The ROM version, region code, OPT type, etc. are displayed if [5] is selected in the Test Mode Menu. The parenthesized hexadecimal number in the version number field indicates the checksum value of the ROM.

* Note after Downloading
After downloading ROM data, sometimes it happens that checksum is not the same as that of ROM data that has been downloaded.
In such a case, go back to the menu screen and select "0. Syscon Diagnosis", then select "1. All" in "2. Version". If the result of this operation does not give an agreement, it must be either Download error or ROM error.

4-9. VIDEO LEVEL ADJUSTMENT

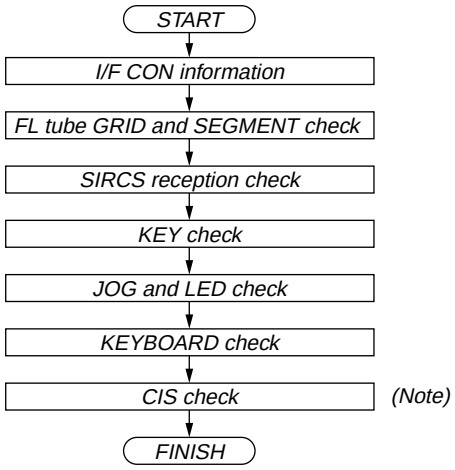
On the Test Mode Menu screen, selecting [6] displays color bars for video level adjustment. During display of color bars, OSD disappears but the menu screen will be restored if pressing any key.

4-10. IF CON SELF DIAGNOSTIC FUNCTION

1. PANEL-L BOARD (IF CON) TEST MODE

The PANEL-L board test mode is the IF CON self diagnostic mode. The IF CON can diagnose the functions of the PANEL-L board that the IF CON controls. Normally, the IF CON makes a serial communication with the SYSTEM CONTROL and operates following he commands from the SYSTEM CONTROL, but in the Test mode, the IF CON operates independently from the SYSTEM CONTROL.

Execute the Self Check Mode along the following flow.



Note: As for the CIS check, conduct the test by another method.

2. OPERATION OF SELF CHECK MODE

The Self Check mode is the function to conduct the basic test to the FL display and panel section.

2-1. How to enter the Self Check mode

The Self Check mode starts if either of the following conditions is satisfied.

Condition 1:
With the SELF_CHECK (pin ⑨⑦) of the IF CON (IC1003) on the PANEL-L board kept "low", turn the power on. (Short the CL1001.)

Condition 2:
While pressing the ■ key on the set when the set is in standby state, press the ↩ (RETURN) → DISPLAY key on the remote commander and the mode transits to the Self Check mode.

When the Self Check mode started, "TEST START" is displayed on the FL tube for 2 seconds and then the Self Check proceeds to the IF CON information display.

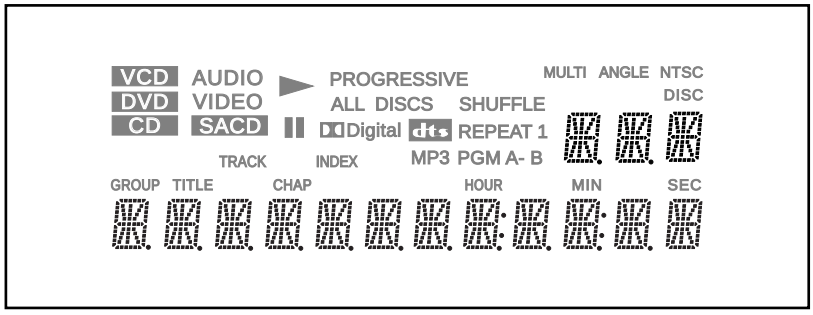
2-2. How to release the Self Check mode

To release the Self Check mode, press the I/⏻ key on the set or remote commander during the Self Check mode.

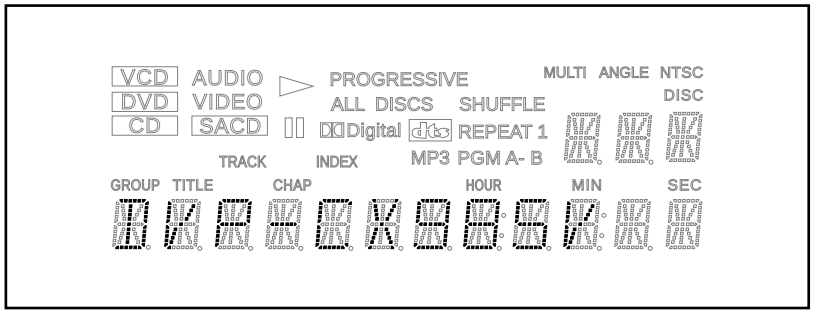
2-3. IF CON information display

Upon transition to the IF CON information display, the display of (1) to (4) shown below is repeated.

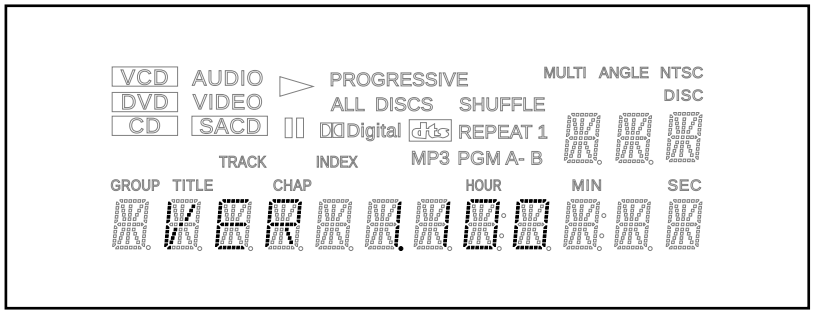
(1) FLD all ON (for 2 seconds)



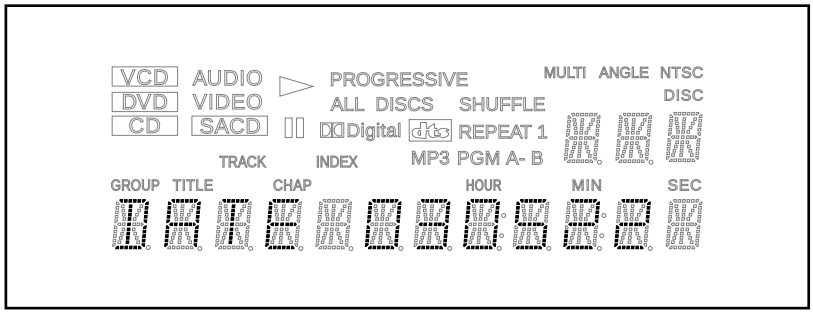
(2) MODEL display (for 2 seconds)



(3) Version display (for 2 seconds)



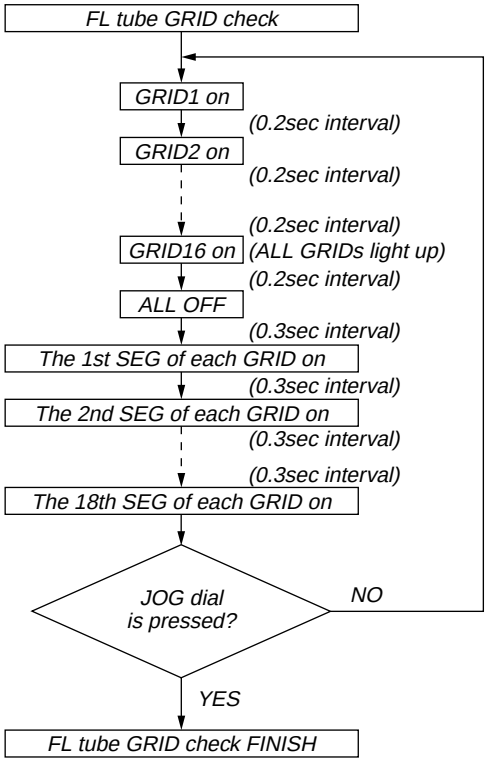
(4) ROM creation date display (for 2 seconds)



If the JOG dial on the front panel of the set is pressed, the test proceeds to the following FL tube GRID and SEGMENT check.

2-4. FL tube GRID and SEGMENT check

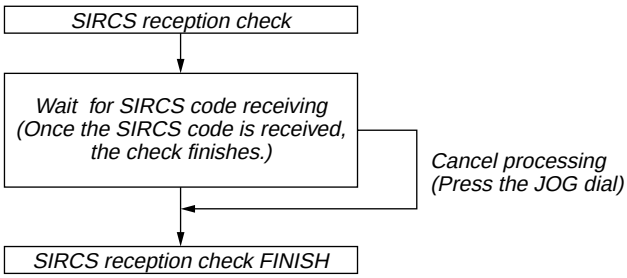
First, a grid lights up one after another, and when grid 16 lights up, all grids light up.
Next, all grids go off, and segments are displayed while changing the patterns.
A way of this display is repeated.
(The interval of grid lighting is 0.2 second, and that of segment lighting is 0.3 second.)



If the JOG dial on the front panel of the set is pressed, the test proceeds to the following SIRCS reception check.

2-5. SIRCS reception check

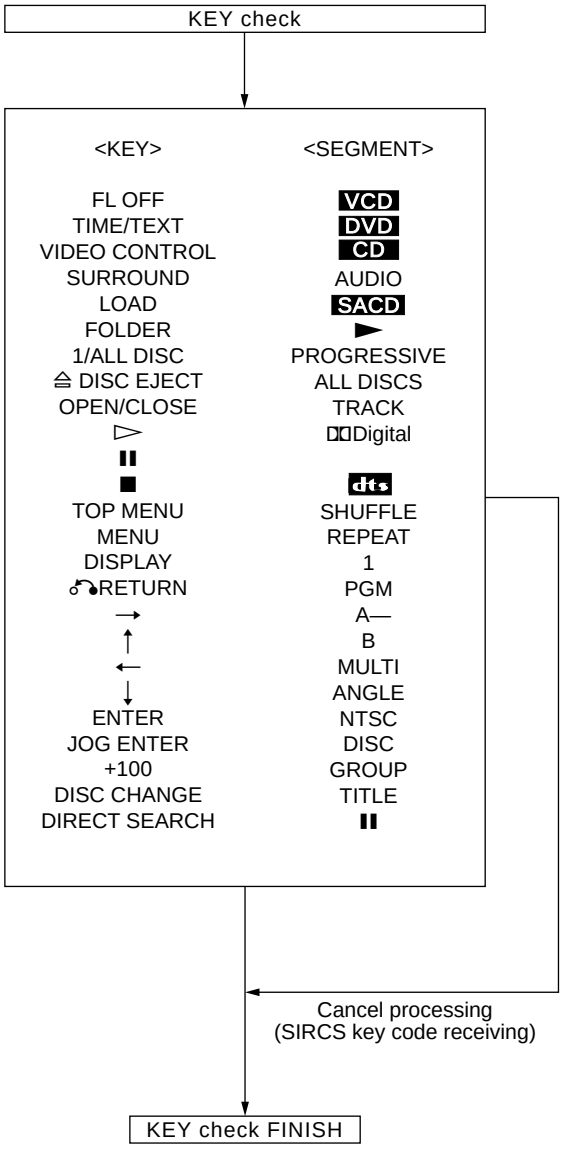
Upon start of the SIRCS reception check, “SIRCS CHECK” is displayed on the FL tube.
Once the SIRCS key code is received, the test proceeds to the following KEY check.


SIRCS reception check
Wait for SIRCS code receiving
(Once the SIRCS code is received, the check finishes.)
Cancel processing
(Press the JOG dial)
SIRCS reception check FINISH

If the JOG dial on the front panel of the set is pressed as a cancel processing of the SIRCS reception check, the test proceeds to the following KEY check.

2-6. KEY check

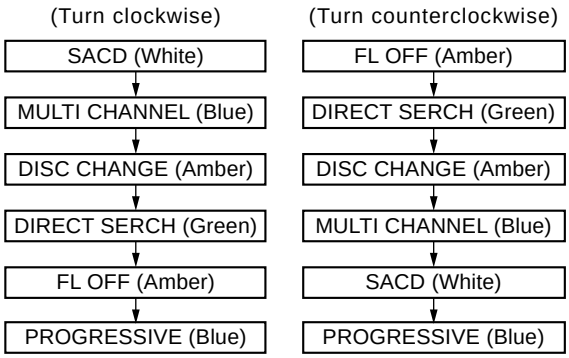
After the SIRCS reception check finished, the KEY check is executed.
Upon start of the KEY check, “KEY CHECK” is displayed on the FL tube.
24 keys are checked as described below.
Each time a key (except I/⏻ key) is pressed, the specified segment lights up, and at one second after all keys were pressed, all of FL tube go off and the Key check finishes.



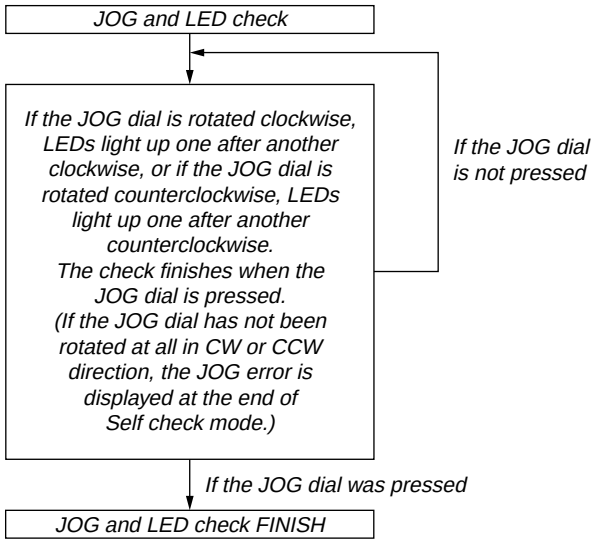
If the SIRCS key code is received as a cancel processing of the KEY check, the test proceeds to the following JOG and LED check.

2-7. JOG and LED check

After the Key check finished, the JOG and LED check is executed as follows.
Upon start of the JOG and LED check, “JOG AND LED” is displayed on the FL tube.
There are seven LEDs. The order in which the LEDs light up when the JOG dial is rotated is as described below.

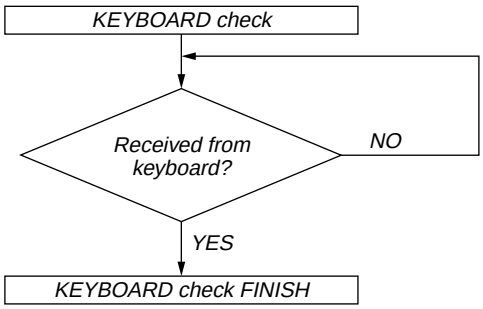


If the JOG dial is pressed during the JOG and LED check, the JOG and LED check finishes and the test proceeds to the following KEYBOARD check.


JOG and LED check
If the JOG dial is rotated clockwise, LEDs light up one after another clockwise, or if the JOG dial is rotated counterclockwise, LEDs light up one after another counterclockwise.
The check finishes when the JOG dial is pressed.
(If the JOG dial has not been rotated at all in CW or CCW direction, the JOG error is displayed at the end of Self check mode.)
If the JOG dial is not pressed
If the JOG dial was pressed
JOG and LED check FINISH

2-8. KEYBOARD check

After the JOG and LED check finished, the KEYBOARD check is executed.
Once a signal is received from the keyboard, the KEYBOARD check finishes.
The “KEYBOARD” is displayed on the FL tube until a signal is received from the keyboard.



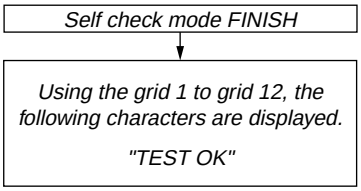
If the JOG dial on the front panel of the set is pressed during the KEYBOARD check, the KEYBOARD check finishes and the test proceeds to the following check.

2-9. CIS check

The CIS check is conduced by another method, and therefore it is not executed in the IF CON Self Check mode.

2-10. Operation at completion of Self Check Mode

After the CIS check finished, characters indicating the completion of Self Check mode are displayed.
At this time, even if a signal from a key on the set, remote commander, or keyboard is received, nothing changes.



At the SIRCS reception check, KEY check, JOG and LED check, and KEYBOARD check, if you proceed to the next check without completing current check, the check name that has not completed yet is displayed instead of “TEST OK”, as follows.

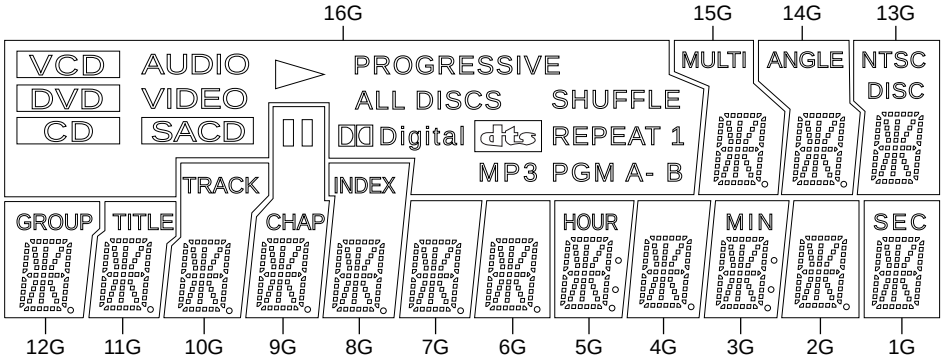
If SIRCS reception check has not completed (If JOG dial is pressed during SIRCS reception check)	“SIRCS NG”
If KEY check has not completed (If SIRCS key code is received during KEY check)	“KEY NG”
If JOG and LED check has not completed (If JOG dial is pressed without rotating JOG dial even once during JOG and LED check)	“JOG LED NG”
If KEYBOARD check has not completed (If JOG dial is pressed during a signal reception from keyboard)	“KEYBOARD NG”

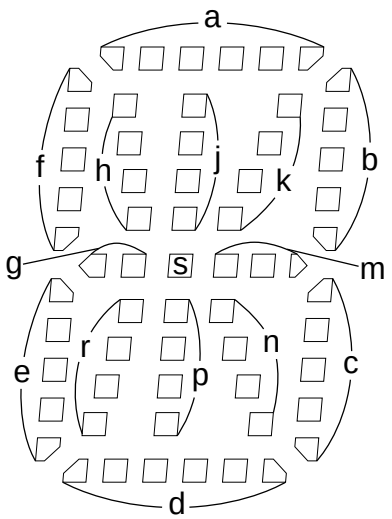
Also, if two or more checks have not completed yet

All four checks are erroneous	“S KY J KB NG”
Three checks are erroneous	“S J KB NG” “S KY KB NG”
Two checks are erroneous	“ KY KB NG” “ KY J NG”

Each error is displayed at the fixed position of the FL tube (not left aligned), and the items that have completed are blank.

Note: The alphabets mentioned above denote the following checks.
S : SIRCS reception check
KY : KEY check
J : JOG and LED check
KB : KEYBOARD check
NG : There are error items.





(15G~1G)

col (5G,3G)

○ Dp (15G,14G,12G~2G)

ANODE CONNECTION

	16G	15G	14G	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	CD	a	a	a	a	a	a	a	a	a	a	a	a	a	a	a
P2	SACD	h	h	h	h	h	h	h	h	h	h	h	h	h	h	h
P3	DVD	j	j	j	j	j	j	j	j	j	j	j	j	j	j	j
P4	VCD	k	k	k	k	k	k	k	k	k	k	k	k	k	k	k
P5	VIDEO	b	b	b	b	b	b	b	b	b	b	b	b	b	b	b
P6	AUDIO	f	f	f	f	f	f	f	f	f	f	f	f	f	f	f
P7	Digital	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
P8	MP3	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s
P9	PGM	g	g	g	g	g	g	g	g	g	g	g	g	g	g	g
P10	A-	e	e	e	e	e	e	e	e	e	e	e	e	e	e	e
P11	B	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
P12	▷	p	p	p	p	p	p	p	p	p	p	p	p	p	p	p
P13	dts	r	r	r	r	r	r	r	r	r	r	r	r	r	r	r
P14	PROGRESSIVE	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c
P15	ALL DISCS	d	d	d	d	d	d	d	d	d	d	d	d	d	d	d
P16	SHUFFLE	-	-	-	-	-	-	▯▯	-	-	-	col	-	col	-	-
P17	REPEAT	Dp	Dp	DISC	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	-
P18	1	MULTI	ANGLE	NTSC	GROUP	TITLE	TRACK	CHAP	INDEX	-	-	HOUR	-	MIN	-	SEC

4-11. TROUBLESHOOTING

4-11-1. Cannot Enter Test Mode

You cannot enter the Test mode when either button has been pressed by any reason with the board assembled in the front panel. In this state, the power does not turn on even under normal condition (the unit is kept in standby state), and also no button is active and the remote commander is not accepted. To check this state, you can enter forcibly the IF CON self-diagnosis mode by turning on the AC power with the SELF_CHECK (pin ⑨⑦) of the IF CON (IC1003) on the PANEL-L board kept "low". The IF CON (IC1003) checks the SELF CHECK port only after the power on reset (only at AC supply, not in standby state).

4-11-2. Faults in Test Mode (MB board)

1. The test mode menu is not displayed.

1-1. Board visual check

Check that the ICs of SYSCON (IC104), ROM (IC106), AVD (IC403), ARP & SERVO (IC301) are working correctly.
Check that outside appearance of the ICs is normal.
Check that IC pins are not short-circuited.
Check that there is no soldering error.
Check that outside appearance of the capacitors and resistors is normal.

1-2. Power supply voltage check

Check the power voltage of the power connector (CN101).
Check the power voltage of SYSCON (IC104).
Check the power voltage of ROM (IC106).
Check the power voltage of AVD (IC403).
Check the power voltage of ARP & SERVO (IC301).
If the power voltage has any abnormality →
Check that the power supply lines are not shorted.
Check that there is no soldering error.
If any abnormality cannot be found still →
Check that each IC is working normally.

1-3. Clock signal check

Measure the clock signal frequency at CPUCK (CL102) of SYSCON (IC104) with an oscilloscope.
If the 8.25 MHz signal appears. → Check the machine according to section 1-3-1
If the 33 MHz signal appears. → Check the machine according to section 1-3-2.
If other frequencies are output.
R106 and R107 have defective soldering, X101 crystal oscillator is defective.
If the measurement point is fixed to either "H" or "L". →
Observe XRESET (pin-⑦⑥) of SYSCON (IC104) with an oscilloscope.
If the measurement point is "L", check the following items.
If the IC has defective soldering, if the IC is short-circuited.
If the measurement point is "H",
→ Component X101 or SYSCON (IC104) is defective.

1-3-1. When the 8.25 MHz signal appears at CPUCK

- Check the XRD, XWRH and CS0X signal.
  Observe XRD (pin-⑦⓪), XWRH (pin-⑦①), and XROMCS (pin-⑤⑧) of SYSCON (IC104) with an oscilloscope.
  If these pins are fixed to either "L" (0V) or "H" (3.3V), or if these pins stay in the center voltage, check the followings.
  Check if the signal line does not have the defective soldering.
  Check if the signal line is short-circuited with other signal lines.
  If you cannot find any problem → SYSCON (IC104) is defective.
- HA [0 to 21] signal and HD [0 to 15] signal check
  Observe HA [0 to 21] (pins-⑩② to ⑩⑨, ⑪① to ⑪⑧, ⑫⓪, ① to ⑤) of SYSCON (IC104) and HD [0 to 15] (pins-⑧⑤ to ⑩⓪) with an oscilloscope.
  If these pins are fixed to either "L" (0V) or "H" (3.3V), or if the HA pin stays in the center voltage, check the followings. (HD stays in the center voltage when it is normal.)
  → Check if the signal line does not have the defective soldering, or is short-circuited with other signal line or SYSCON (IC104) is defective.
- Reset signal check
  Check if XRESET (pin-⑦⑥) of SYSCON (IC104) normal or not.
  The signal starts up at the same time as Vcc → Defective soldering.

If the trouble does not apply to any of the above-described phenomenon, SYSCON (IC104) or ROM (IC106) is defective.

1-3-2. When the 33 MHz signal appears at CPUCK

- WAIT signal check

  Observe XWAIT (pin-⑥⑦) of SYSCON (IC104) with an oscilloscope.

  If it is fixed to "L" (0V). ⟶ Observe XAVCS0, XAVCS1, XARPCS and XSDSPCS (pins-⑥⓪ to ⑥③).

  If XAVCS0 or XAVCS1 is "L". ⟶ AVD (IC403) has defective soldering or AVD is defective.

  If XARPCS or XSDSPCS is "L". ⟶ ARP & SERVO (IC301) has defective soldering or ARP & SERVO is defective.

  If any one of the above is not "L". ⟶ XWAIT, XAVCS0, XAVCS1, XARPCS and XSDSPCS is short-circuited or has the defective soldering or AVD (IC403) is defective or ARP & SERVO (IC301) is defective.

  Center voltage ⟶ The XWAIT line has defective soldering or is short-circuited or AVD (IC403) is defective or ARP & SERVO (IC301) is defective or SYSCON (IC104) is defective.

- XROMCS, XRAMCS, XAVCS0, XAVCS1, XARPCS and XSDSPCS signal check

  Observe XROMCS, XRAMCS, XAVCS0, XAVCS1, XARPCS and XSDSPCS (pins-⑤⑧ to ⑥③) of SYSCON (IC104) with an oscilloscope.

  If they are fixed to "L" (0V) or if to center voltage ⟶ Check that the ICs do not have the defective soldering or is shortcircuited with the other signal lines or SYSCON (IC104) is defective.

  XROMCS: ROM (IC106)
  XAVCS0, XAVCS1: AVD (IC403)
  XARPCS, XSDSPCS: ARP & SERVO (IC301)

If the trouble symptom does not apply to any of the above phenomenon, SYSCON (IC104) or ROM (IC106) is defective.

2. Test mode menu is displayed but the machine stops when menu is selected

2-1. AVD (IC403) check

Observe SDCLKO (pin-①②⑦) of AVD (IC403) with an oscilloscope.

95 MHz ⟶ No problem

27 MHz ⟶ Observe the XRST, HA, HD, XRD, XWRH and CS signal waveform at the respective pins of AVDEC, AVD (IC403) is defective.

If the signal is other than the above frequencies ⟶ AVD (IC403) 27MHz signal line (CLKI (pin-①⑤⑧), SCLKIN (pin-①⑥⓪)) is short-circuited, IC mount is defective, AVD (IC403) is defective, PLL (IC103) is defective.

2-2. INT signal check

Observe XAVDECINT, XARPINT and XSDSPINT (pins-⑯ to ⑱) of SYSCON (IC104) with an oscilloscope.

If they are fixed to "L" (0V) or fixed to the center voltage ⟶ Check that the ICs do not have the defective soldering, or are short-circuited, SYSCON (IC104) is defective, or the following ICs are not defective.

XAVDECINT: AVD (IC403)
XARPINT, XSDSPINT: ARP & SERVO (IC301)

2-3. If any abnormality cannot be confirmed by the above-described checks, check the CS signal that is currently output.

The CS signal other than XROMCS is being output. ⟶ IC mount is defective or the IC is defective depending on the moving CS signal.

XAVCS0, XAVCS1: AVD (IC403)
XARPCS, XSDSPCS: ARP & SERVO (IC301)

If the trouble is not applicable to any of the above phenomenon, SYSCON (IC104) or ROM (IC106) is defective.

3. If the message "SDSP No Ack" appears after the menu is displayed.

3-1. ARP & SERVO (IC301) clock signal check

Check frequency of CLKIN (pin-①⑤⓪)

33 MHz ⟶ Normal

Frequency other than 33 MHz ⟶ CLKIN is short-circuited or defective soldering or PLL (IC103) is defective or ARP & SERVO (IC301) is defective

3-2. ARP & SERVO (IC301) PLL oscillation check

Observe PLCKO (pin-⑧⑦) of ARP & SERVO (IC301) with an oscilloscope.

If the pin is fixed to either "L" (0V) or "H" (3.3V).

If XRST if fixed to "L". XRST has the defective soldering, In all other cases. ARP & SERVO (IC301) is defective

If it is oscillating.

HA [0 to 7] are HD [8 to 15] are short-circuited, check XSDPIT and XSDPCS or ARP & SERVO (IC301) is defective.

4. If trouble occurs at the specific item of the "Diag All Check".

IC mount of the NG item is defective or IC is defective.

5. Picture and audio are not output.

Check connection of CN501 and CN601

Check for the defective connection of flat cable and check of damage of the flat cable.

6. Picture is output but audio is not output.

Check the audio data output (at pins-㉔, ㉘, and ㉙) of AVD (IC403)

The audio data is not output. ⟶ AVD (IC403) or audio DAC (IC502) mount is defective or power supply is defective or AVD (IC403) or audio DAC (IC502) is defective.

PLL (IC103) 512fs output check

If the frequency or waveform has abnormality. ⟶ The signal line has defective soldering or the signal line is short-circuited with other signal lines or PLL (IC103) is defective.

7. Audio is output but picture is not output.

Observe pins-㊲, ㊳, ㊴, ㊷, ㊸ and ㊹ of VDAC (IC604) with an oscilloscope.

If the analog signal is not output. ⟶ The signal line has the defective soldering or is short-circuited or parts are defective or VDAC (IC604) is defective.

4-11-3. Drive Auto Adjustment stops due to error.

The ARP & SERVO (IC301) analog circuit of MB board is defective or RF-Amp (IC201) or M-Driver (IC202) peripheral circuit is defective or optical pickup block is defective or flat cable connection is defective

4-11-4. The product itself is defective.

- If MB does not have any problem,
  The board other than MB board is defective or connection is defective or optical pickup block is defective or mechanism deck is defective

1. FL display does not light when the POWER button is pressed.

1-1. Check the EVER -11V (pin-②), EVER +11V (pin-⑬), EVER +3.3V (pin-⑪), SW +5V (pin-⑫) voltage at CN201 of the power supply block

If voltage is abnormal. ⟶ The power supply block is defective.

1-2. Check if the fuse on the power block has blown of not.

If the fuse has blown ⟶ Replace the fuse.

1-3. Check the P-CONT (pin-①) at CN205 of the AV board when the POWER button is pressed.

If it remains at "L",
⟶ The signal line has the defective soldering or it is short-circuited with other signal lines or capacitor or resistor is defective or IFCON is defective or connection between the power supply block and the AV board is defective, or connector installation is defective, or the power supply block is defective.

1-4. Check if the button is kept depressed in the IFCON self mode.

If the button is kept depressed. ⟶ The front panel is defective, or PANEL-L board is defective.

1-5. Check PON_CHECK (pin-㉟) of IFCON (IC1003) on the PANEL-L board.

If it is 0.5 V or more. ⟶ The power supply is defective, or PANEL-L board is defective.

1-6. Check FL1001 (pin-① & pin-㊼) on the PANEL-L board.

If no voltage supply ⟶ DC/DC converter (T1081) defective, or the PANEL-L board is defective.

2. FL display light once and becomes not light when POWER button is pressed.

2-1. Check CN201 voltage of the power supply block when the FL display light on.

If voltage is abnormal. ⟶ The power supply block is defective, or the PANEL-L board is defective, or MB board is defective.

2-2. Check XFRRST (pin-②) at CN102 on the MB board.

If it is fixed to "L". ⟶ The signal line has defective soldering, or is short-circuited with other signal lines, or parts are defective.

2-3. Check XIFBUSY (pin-③), XIFCS (pin-④), SI0 (pin-⑤), SO0 (pin-⑥) and SC0 (pin-⑦) at CN102

If they are fixed to "H" or "L".
⟶ The signal line has defective soldering, or is short-circuited with other signal line, or parts are defective, or SYSCON (IC104) is defective
If they change between "L/H".
Connector installation is defective, or the PANEL-L board is defective, or SYSCON (IC104) is defective.
If they stay in the center voltage.
Poor connection of flexible wiring board such as it is inserted in an angle diagonally, or defective soldering, or is short-circuited with other signal line.

2-4. Check PON_CHECK (pin-㉟) of IFCON (IC1003) on the PANEL-L board.

If rise-up time from 0.5 V to 1.5 V or more takes longer time, or it does not exceed 1.5 V or more. ⟶ The PANEL-L board is defective.

3. Both picture and audio are not output.

Connection between the power supply block and the AV board is defective, or connection between the AV board and the MB board is defective, or connector installation is defective, or AV board is defective.

4. Picture is not normal. (Block noise or others appear.)

The MB board AVD (IC403) or SDRAM (IC404, IC405) is defective, or ARP & SERVO (IC301) is defective.

SECTION 5
MECHANICAL ADJUSTMENTS

POP UP MECHANISM ADJUSTMENT

1. Connect the AC plug of the set to AC consent, then the set enters standby mode.
2. Press the [TOP MENU], [CLEAR] and [I/⏻] key in turn, then the set enters the diag mode.
3. Select 2. Drive Manual Operation by pressing the [2] key.
4. Select 8. Changer Mecha check by pressing the [8] key.
5. Press the [ENTER] key, then the CDM initializies.
6. Press the [PAUSE] key, then the T.table rotates to the mecha adjustment position, the door opens and the T. table locks. (Fig. 1)
7. Keep pressing the [RIGHT] key to raise the pop up part.
8. Loosen the adjusting screw, move the screwdriver left and right until the lever (POP UP) does not touch the slit wall, and secure the screw. (Fig. 2)

The following keys have special functions in this mode.
[UP] key : Loading mechanism IN operation
[DOWN] key : Loading mechanism OUT operation
[RIGHT] key : Pop up part UP operation
[LEFT] key : Pop up part DOWN operation

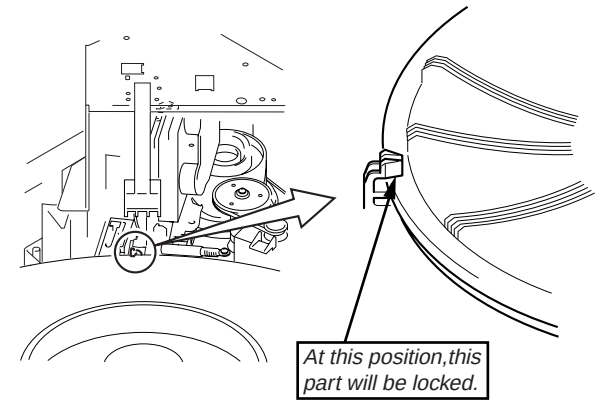


Fig. 1

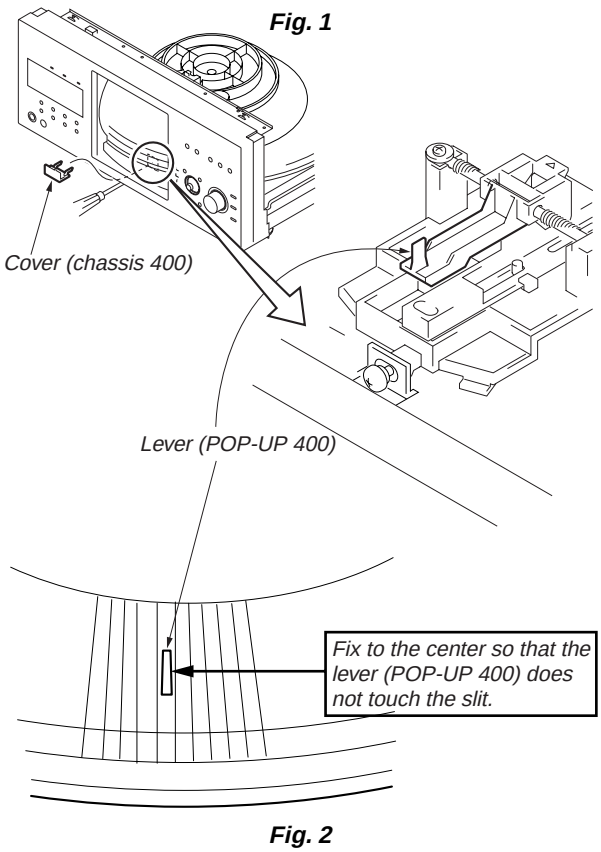


Fig. 2

TABLE SENSOR ADJUSTMENT

After the Pop Up Mechanism Adjustment, perform this adjustment continuously.

1. Loosen the fixing screw. Moving the holder little by little, stop it at a boundary point where the PROGRESSIVE LED (blue) goes off and the SACD LED (white) lights up. If the holder is moved in reverse direction, stop the holder at a point where the SACD LED goes off and the PROGRESSIVE LED lights up.

2. Moving the T. table right and left with a hand after the screw is fixed, the table will move by the play of the T. table. If the LEDs light up alternately, the adjustment will be performed correctly. (Fig. 3)

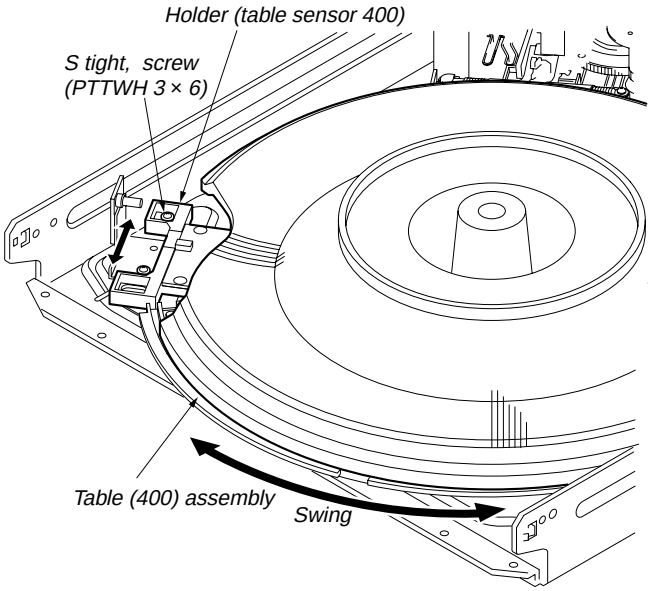


Fig. 3

SECTION 6
ELECTRICAL ADJUSTMENTS

In making adjustment, refer to 5-5. Adjustment Related Parts Arrangement.

This section describes procedures and instructions necessary for adjusting electrical circuits in this unit.

Instruments required:

1) Color monitor TV
2) Oscilloscope 1 or 2 phenomena, band width over 100 MHz, with delay mode
3) Frequency counter (over 8 digits)
4) Digital voltmeter
5) Standard commander (RM-DX700)
6) CD reference disc
   YEDS-18 (3-702-101-01)
   PATD-012 (4-225-203-01)
7) DVD reference disc
   HLX-501 (J-6090-071-A) (dual layer) (NTSC)
   HLX-503 (J-6090-069-A) (single layer) (NTSC)
   HLX-504 (J-6090-088-A) (single layer) (NTSC)
   HLX-505 (J-6090-089-A) (dual layer) (NTSC)
8) SACD reference disc
   HLXA-509 (J-6090-090-A)
9) Extension Cable (J-6090-107-A)

6-1. AUTO SERVO ADJUSTMENT

After parts related to the servo circuit (RF amplifier (IC201), DSP (IC301), motor driver (IC202), EEPROM (IC101) so on) are replaced, re-adjusting the servo circuit is necessary. Select “ALL” at “DRIVE AUTO ADJUSTMENT” (Refer to page 27 in TEST MODE) and adjust DVD-SL (single layer), CD and DVD-DL (dual layer).

6-2. POWER SUPPLY CHECK

1. POWER Board

Mode	E-E
Instrument	Digital voltmeter
EVER +3.3 V Check	
Test point	CN201 pin ⑪
Specification	3.5 ± 0.2 Vdc
SW +3.3 V Check	
Test point	CN201 pin ⑧
Specification	3.5 ± 0.2 Vdc
SW +5 V Check	
Test point	CN201 pin ⑫
Specification	5.0 ± 0.3 Vdc
SW +11 V Check	
Test point	CN201 pin ⑥, ⑦
Specification	11.0 ± 1.0 Vdc
EVER +11 V Check	
Test point	CN201 pin ⑬
Specification	11.0 ± 1.0 Vdc
EVER –11 V Check	
Test point	CN201 pin ②
Specification	–11.0 ± 1.0 Vdc

Checking method:

1) Confirm that each voltage satisfies the specification.

Note
Because the heatsink installed on the power supply board is a part of the primary side, never touch it to avoid electrical shock.

6-3. ADJUSTMENT OF VIDEO SYSTEM

1. Video Level Adjustment (MB Board)

<Purpose>

This adjustment is made to satisfy the NTSC standard, and if not adjusted correctly, the brightness will be too large or small.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	LINE OUT (VIDEO) connector (75 Ω terminated)
Instrument	Oscilloscope
Adjusting element	RV601
Specification	1.0 $^{+0.04}_{-0.02}$ Vp-p

Adjusting method:

1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
2) Adjust the RV601 to attain 1.0 $^{+0.04}_{-0.02}$ Vp-p.

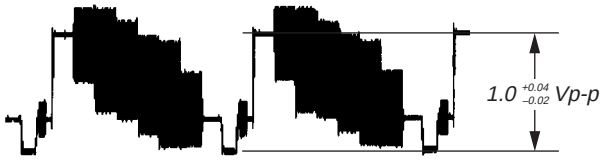


Fig. 6-1

2. Progressive Video Output Level Adjustment (MB Board)

<Purpose>

This adjusts progressive video output level. If it is incorrect, correct brightness will not be attained when connected to, for instance, projector.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	COMPONENT VIDEO OUT (Y) connector (75 Ω terminated)
Instrument	Oscilloscope
Adjusting element	RV602
Specification	1.0 $^{+0.04}_{-0.02}$ Vp-p

Adjusting method:

1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
2) Adjust the RV602 to attain 1.0 $^{+0.04}_{-0.02}$ Vp-p.

Fig. 6-2

3. Checking S Video Output S-Y

<Purpose>

Check S-terminal video output. If it is incorrect, pictures will not be displayed correctly in spite of connection to the TV with a S-terminal cable.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	S VIDEO OUT (S-Y) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	1.0 ± 0.05 Vp-p

Checking method:

1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
2) Confirm that the S-Y level is 1.0 ± 0.05 Vp-p.

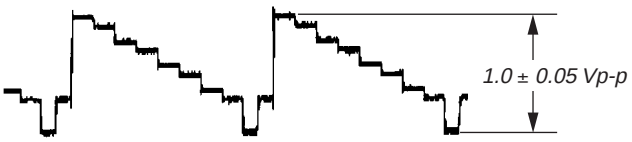


Fig. 6-3

4. Checking S Video Output S-C

<Purpose>

This checks whether the S-C satisfies the NTSC standard. If it is not correct, the colors will be to dark or light.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	S VIDEO OUT (S-C) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	A = 286 ± 30 mVp-p (NTSC)

Checking method:

1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
2) Confirm that the S-C burst is “A”.

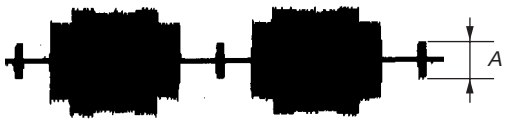


Fig. 6-4

5. Checking Component Video Output Y

<Purpose>

This checks component video output Y. If it is incorrect, correct brightness will not be attained when connected to, for instance, projector.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	COMPONENT VIDEO OUT (Y) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	1.0 ± 0.05 Vp-p

Checking method:

1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
2) Confirm that the Y level is 1.0 ± 0.05 Vp-p.

Fig. 6-5

6. Checking Component Video Output B-Y

<Purpose>

This checks component video output B-Y. If it is incorrect, correct colors will not be displayed when connected to, for instance, projector.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	COMPONENT VIDEO OUT (P_B/C_B) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	A = 646 ± 50 mVp-p

Checking method:

1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
2) Confirm that the B-Y level is A.

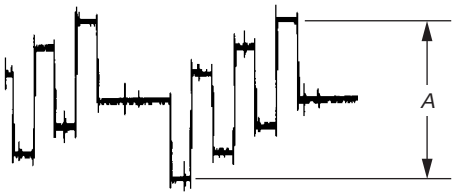


Fig. 6-6

7. Checking Component Video Output R-Y

<Purpose>

This checks component video output R-Y. If it is incorrect, correct colors will not be displayed when connected to, for instance, projector.

Mode	Video level adjustment in test mode
Signal	Color bars
Test point	COMPONENT VIDEO OUT (P_R/C_R) connector (75 Ω terminated)
Instrument	Oscilloscope
Specification	B = 646 ± 50 mVp-p

Checking method:

1) In the test mode initial menu “6” Video Level Adjustment, set so that color bars are generated.
2) Confirm that the R-Y level is B.

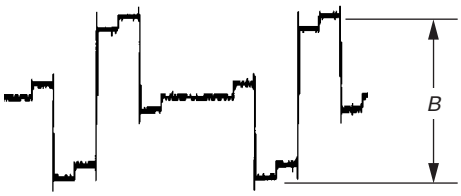
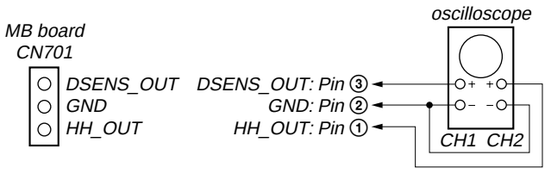


Fig. 6-7

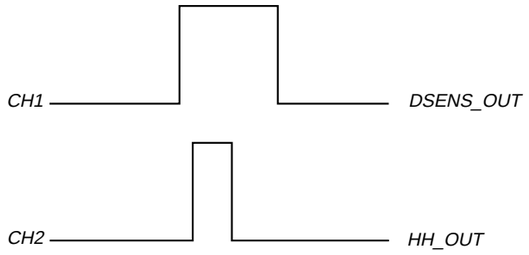
6-4. DISC DETECT SENSOR ADJUSTMENT

Be sure to perform this adjustment after sensor adjustment in MECHANICAL ADJUSTMENT.

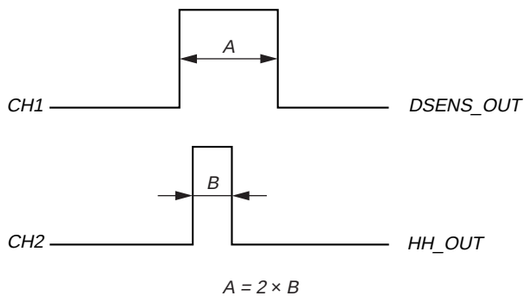
Connection:



Waveform:

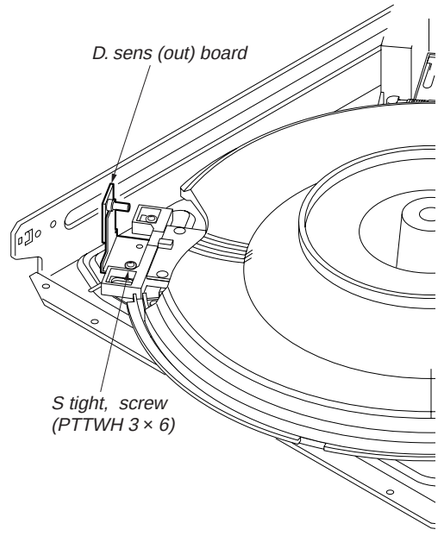


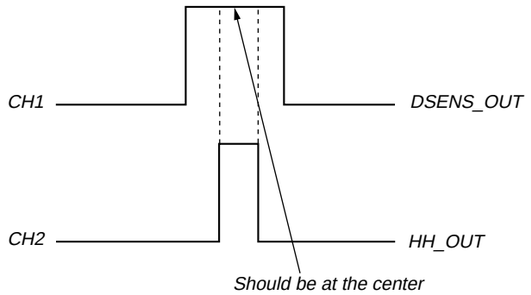
1. Connect the oscilloscope to Pins ①, ② and ③ of CN701 of the MB board.
2. Check that no discs are loaded in the unit.
3. Perform from step 1 to step 5 in Pop Up Mechanism Adjustment.
4. Press the PAUSE key, then the T.table starts to rotate in the clockwise direction.
5. Rotate RV101 of MB board and adjust so that the H portion A of DSENS_OUT waveform is twice the width of the H portion B of HH_OUT waveform.



Adjustment Location: MB board

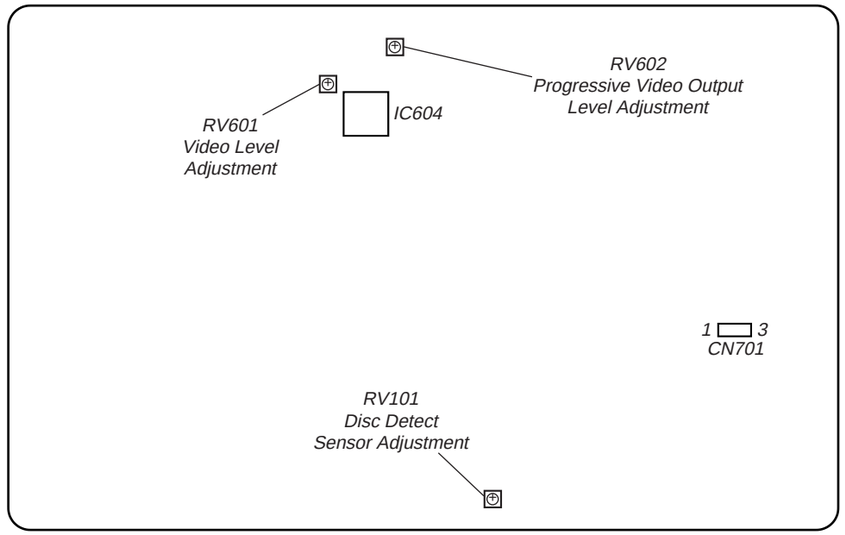
6. Loosen the fixing screw, move the mounting board (SENSOR), and secure the mounting board (SENSOR) at the point the H portion of the HH_OUT waveform comes the center of the H portion of the DSENS_OUT waveform.



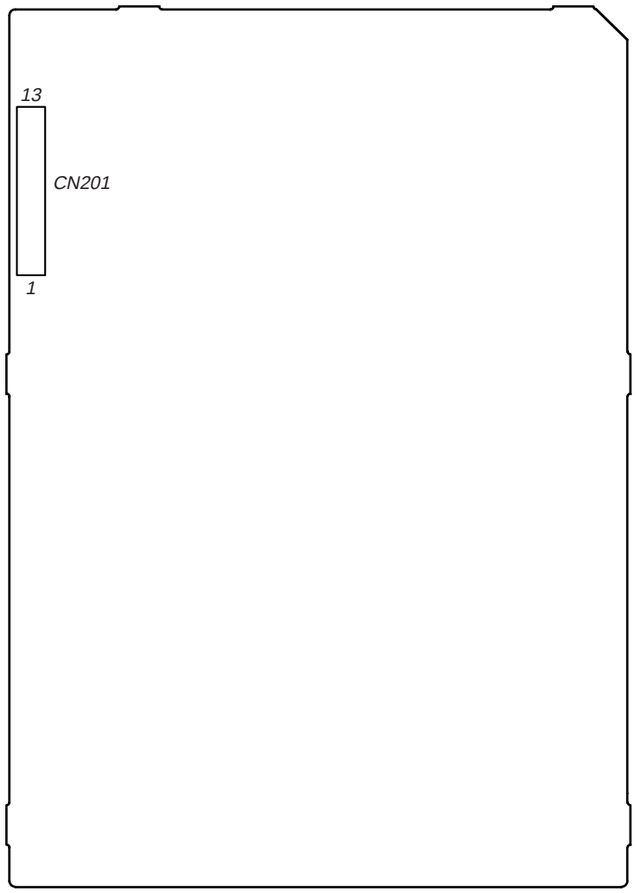


Adjustment Location:

– MB Board (Component Side) –

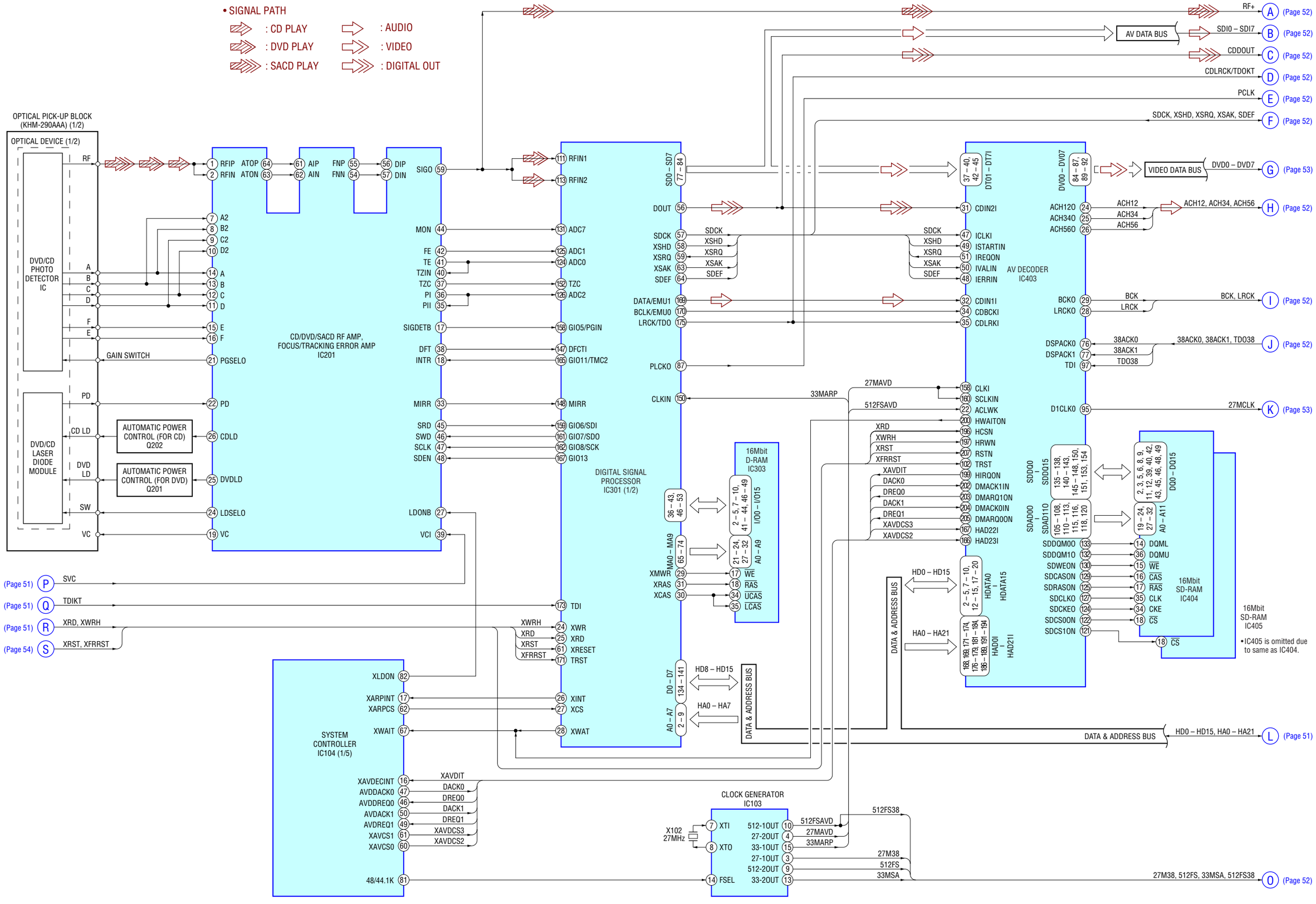


– POWER Board (Conductor Side) –

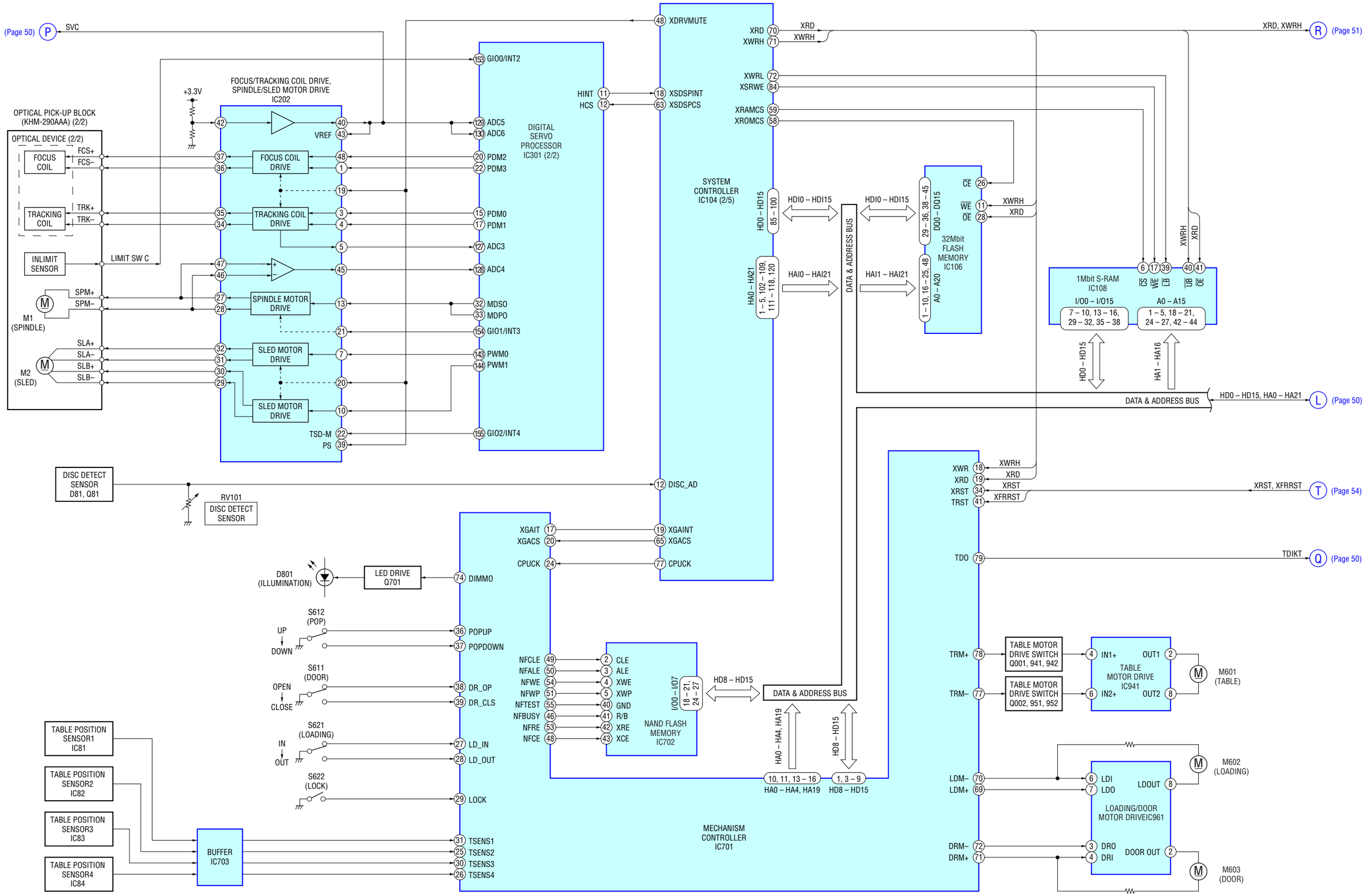


SECTION 7
DIAGRAMS

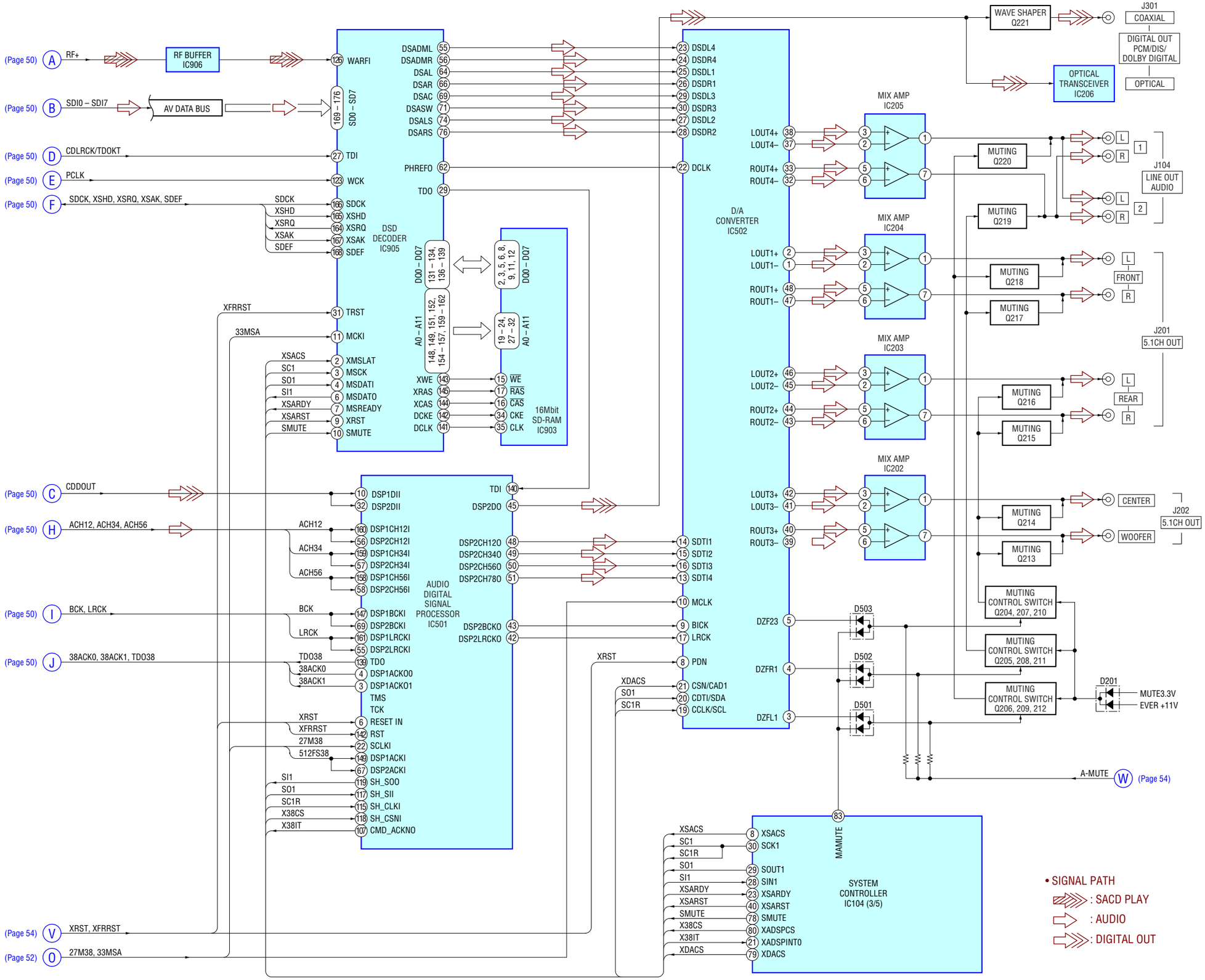
7-1. BLOCK DIAGRAM – RF Section –


• SIGNAL PATH
: CD PLAY
: DVD PLAY
: SACD PLAY
: AUDIO
: VIDEO
: DIGITAL OUT
OPTICAL PICK-UP BLOCK (KHM-290AAA) (1/2)
OPTICAL DEVICE (1/2)
DVD/CD PHOTO DETECTOR IC
DVD/CD LASER DIODE MODULE
AUTOMATIC POWER CONTROL (FOR CD) Q202
AUTOMATIC POWER CONTROL (FOR DVD) Q201
CD/DVD/SACD RF AMP, FOCUS/TRACKING ERROR AMP IC201
DIGITAL SIGNAL PROCESSOR IC301 (1/2)
16Mbit D-RAM IC303
AV DECODER IC403
16Mbit SD-RAM IC404
16Mbit SD-RAM IC405
• IC405 is omitted due to same as IC404.
SYSTEM CONTROLLER IC104 (1/5)
CLOCK GENERATOR IC103
X102 27MHz
AV DATA BUS
VIDEO DATA BUS
DATA & ADDRESS BUS
RF+ (Page 52)
SDI0 – SDI7 (Page 52)
CDDOUT (Page 52)
CDLRCK/TDOKT (Page 52)
PCLK (Page 52)
SDCK, XSHD, XSRQ, XSAK, SDEF (Page 52)
DVD0 – DVD7 (Page 53)
ACH12, ACH34, ACH56 (Page 52)
BCK, LRCK (Page 52)
38ACK0, 38ACK1, TDO38 (Page 52)
27MCLK (Page 53)
HD0 – HD15, HA0 – HA21 (Page 51)
27M38, 512FS, 33MSA, 512FS38 (Page 52)
(Page 51) SVC
(Page 51) TDIKT
(Page 51) XRD, XWRH
(Page 54) XRST, XFRRST

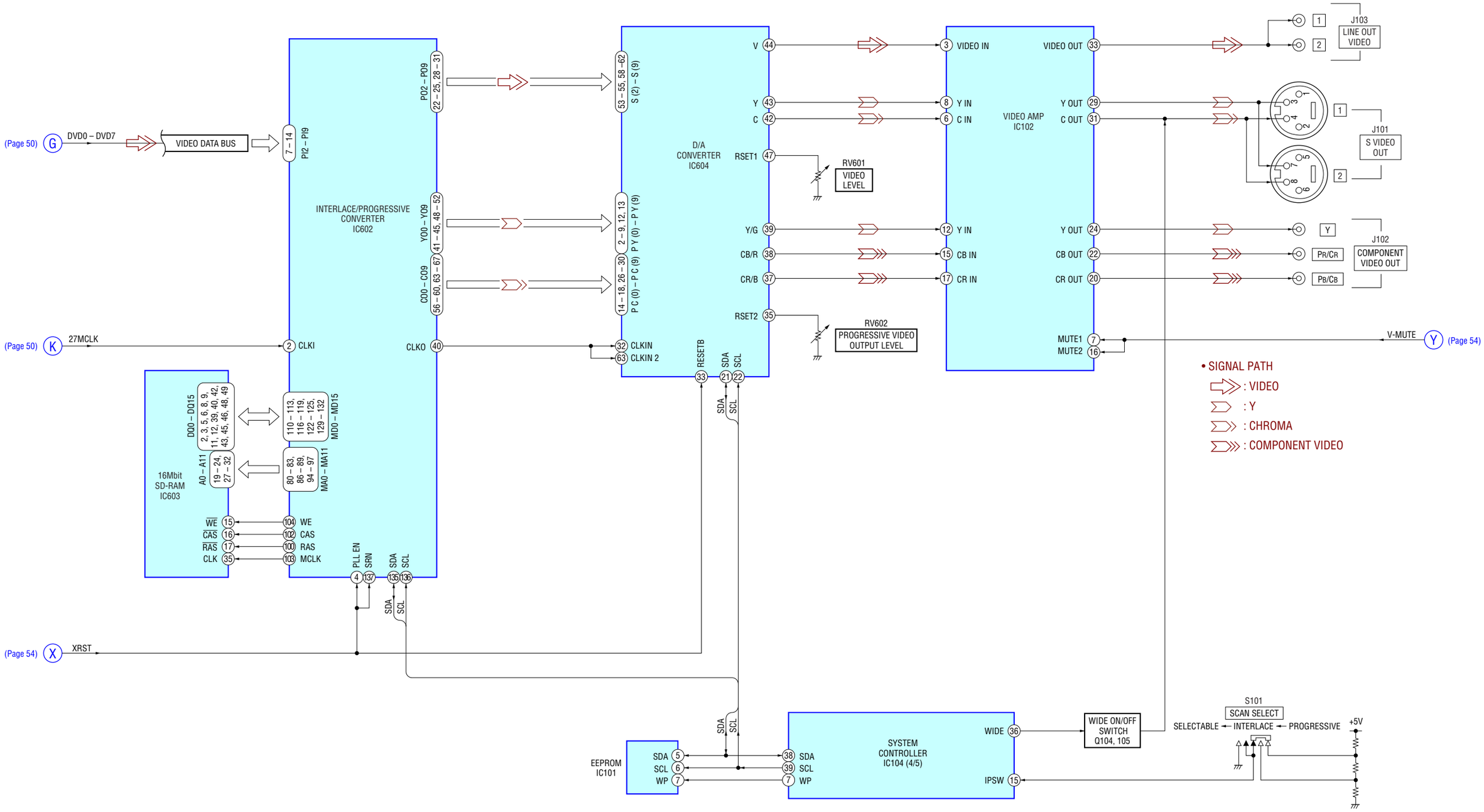
7-2. BLOCK DIAGRAM – SERVO/CHANGER Section –



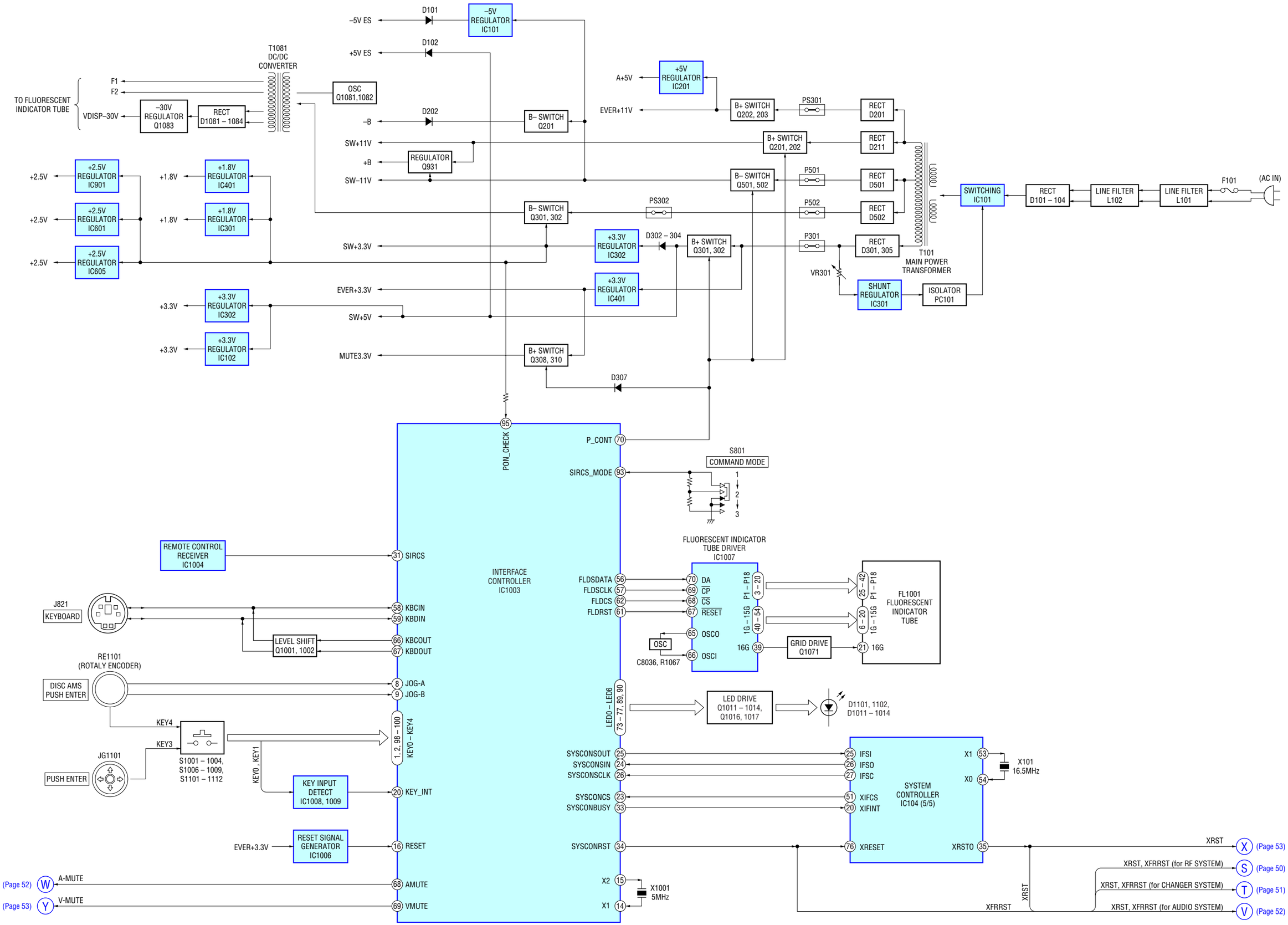
7-3. BLOCK DIAGRAM – AUDIO Section –



7-4. BLOCK DIAGRAM – VIDEO Section –



7-5. BLOCK DIAGRAM – PANEL/POWER SUPPLY Section –



7-6. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

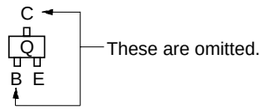
Note on Printed Wiring Board:

- o——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- △ : internal component.
- ▬ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

- MB board is multi-layer board. However, the patterns of intermediate-layer not been included in diagram.
- Indication of transistor



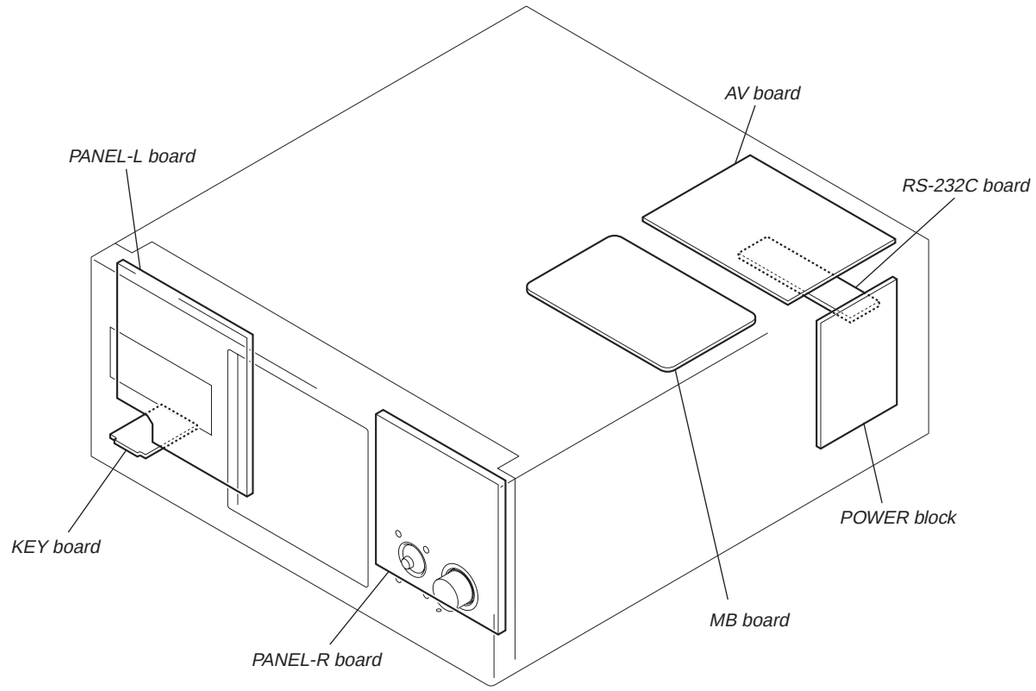
Note on Schematic Diagram:

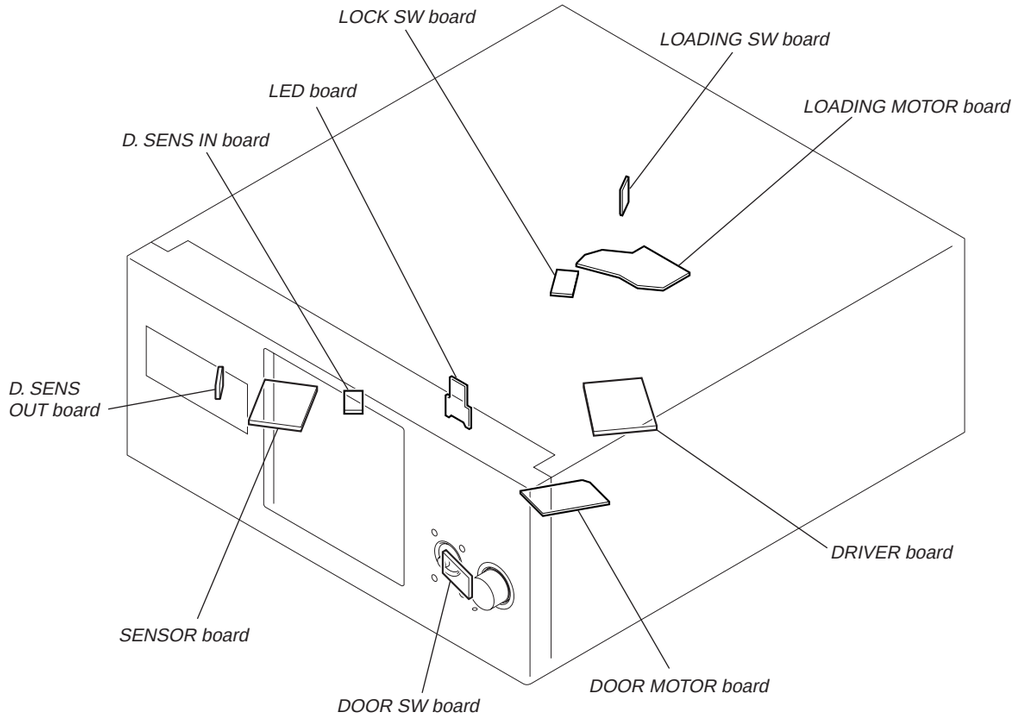
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- : B+ Line.
- : B– Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark : DVD PLAY
  ( ) : SACD PLAY
  [ ] : CD PLAY
  ✻ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  : CD PLAY
  : DVD PLAY
  : SACD PLAY
  : AUDIO
  : VIDEO
  : DIGITAL OUT
  : Y
  : CHROMA
  : COMPONENT VIDEO

- **Circuit Boards Location**





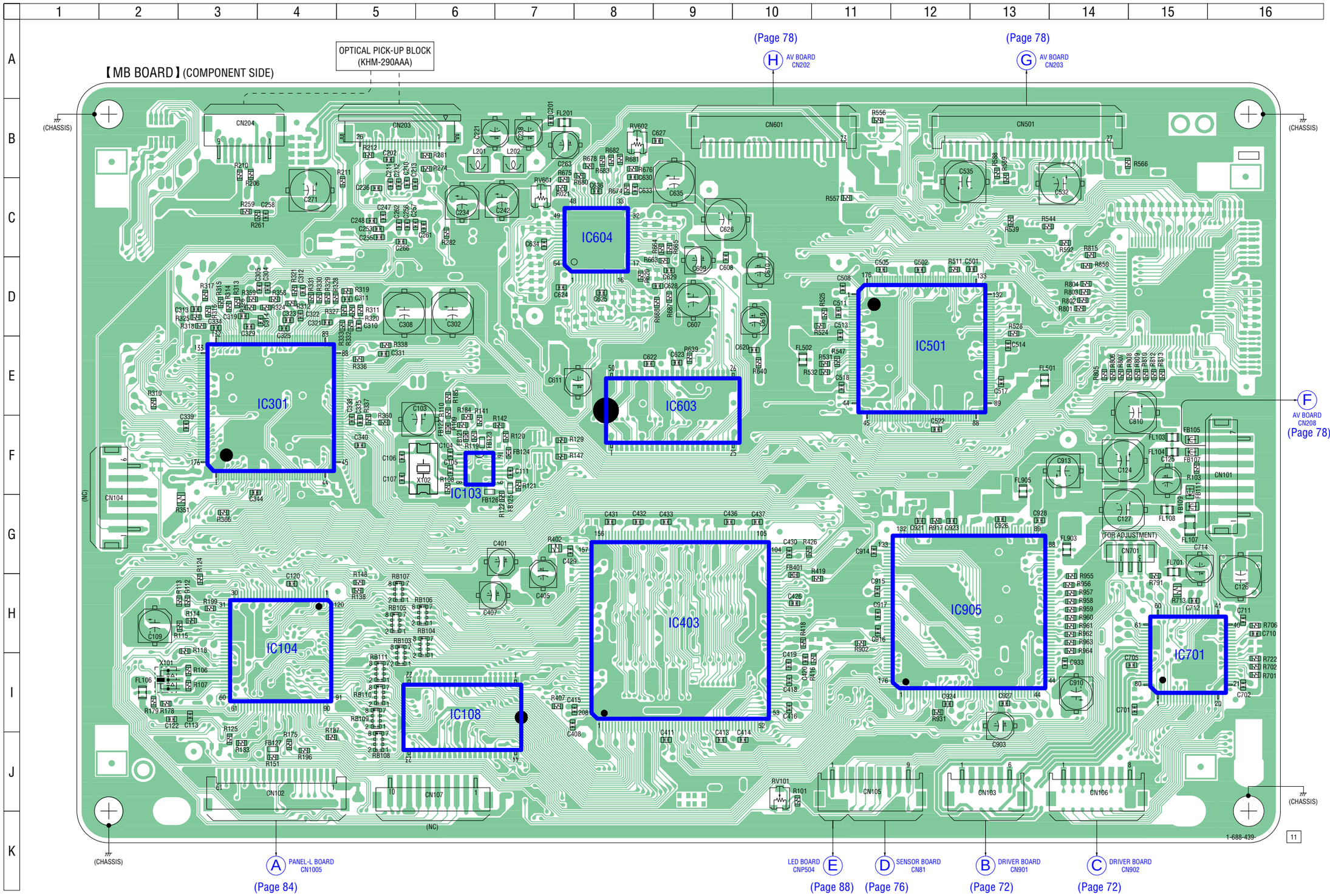
7-7. PRINTED WIRING BOARD – MB Board (Component Side) –

• See page 55 for Circuit Boards Location.

:Uses unleaded solder.

- **Semiconductor Location**

Ref. No.	Location
IC103	F-6
IC104	H-4
IC108	I-6
IC301	E-4
IC403	H-9
IC501	E-12
IC603	E-9
IC604	C-8
IC701	I-15
IC905	H-12

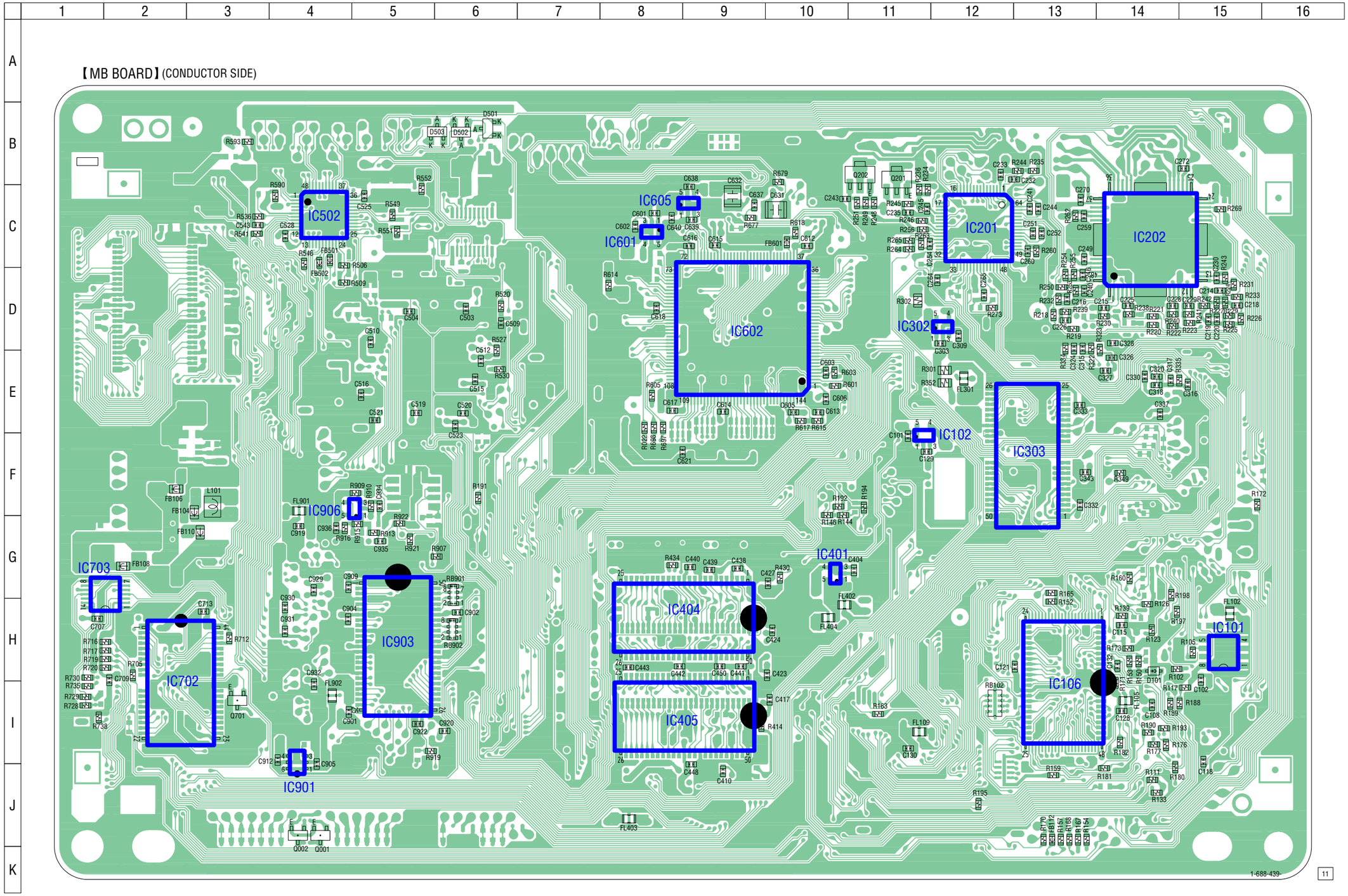


7-8. PRINTED WIRING BOARD – MB Board (Conductor Side) –

• See page 55 for Circuit Boards Location.

:Uses unleaded solder.

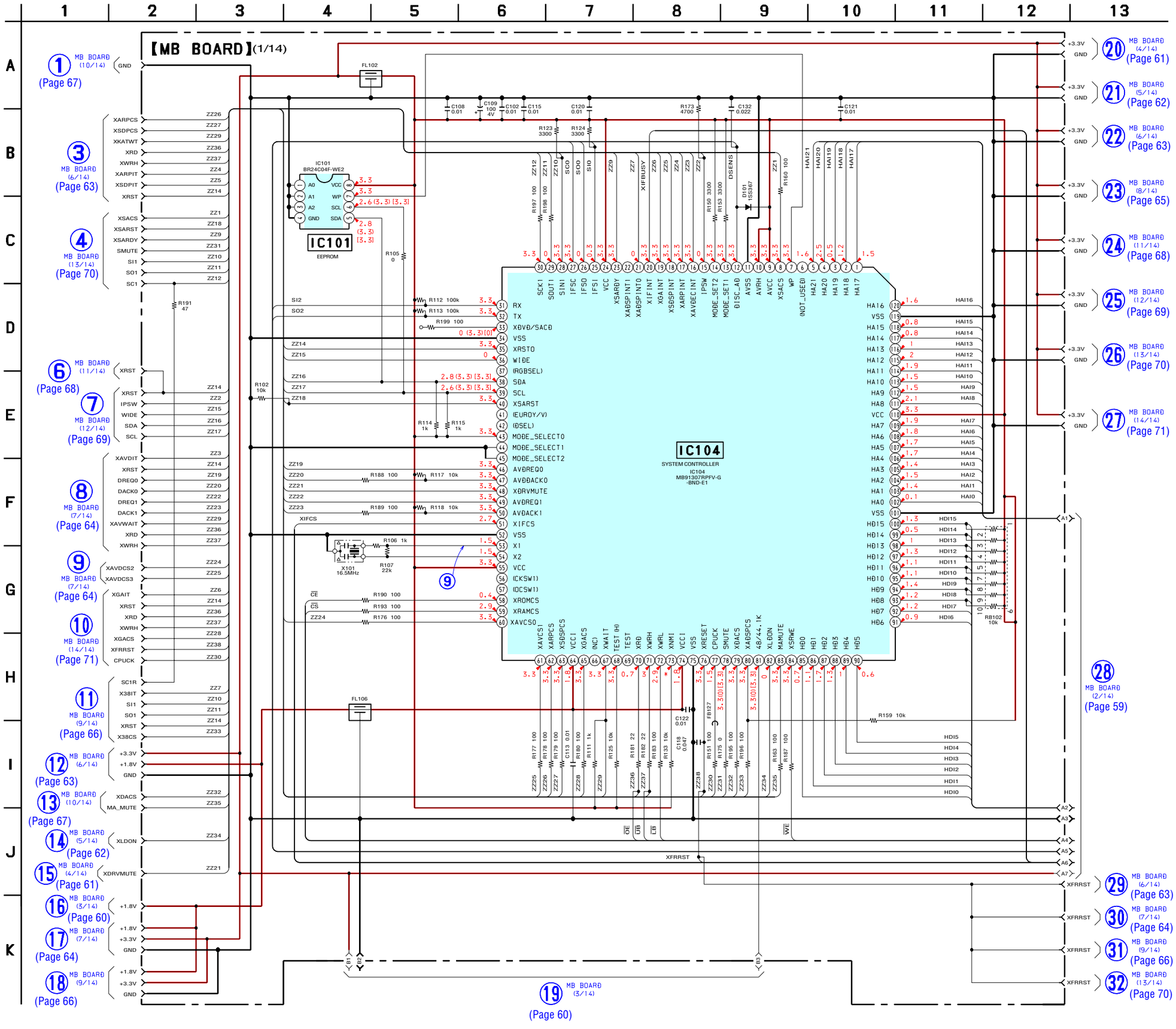
【MB BOARD】(CONDUCTOR SIDE)



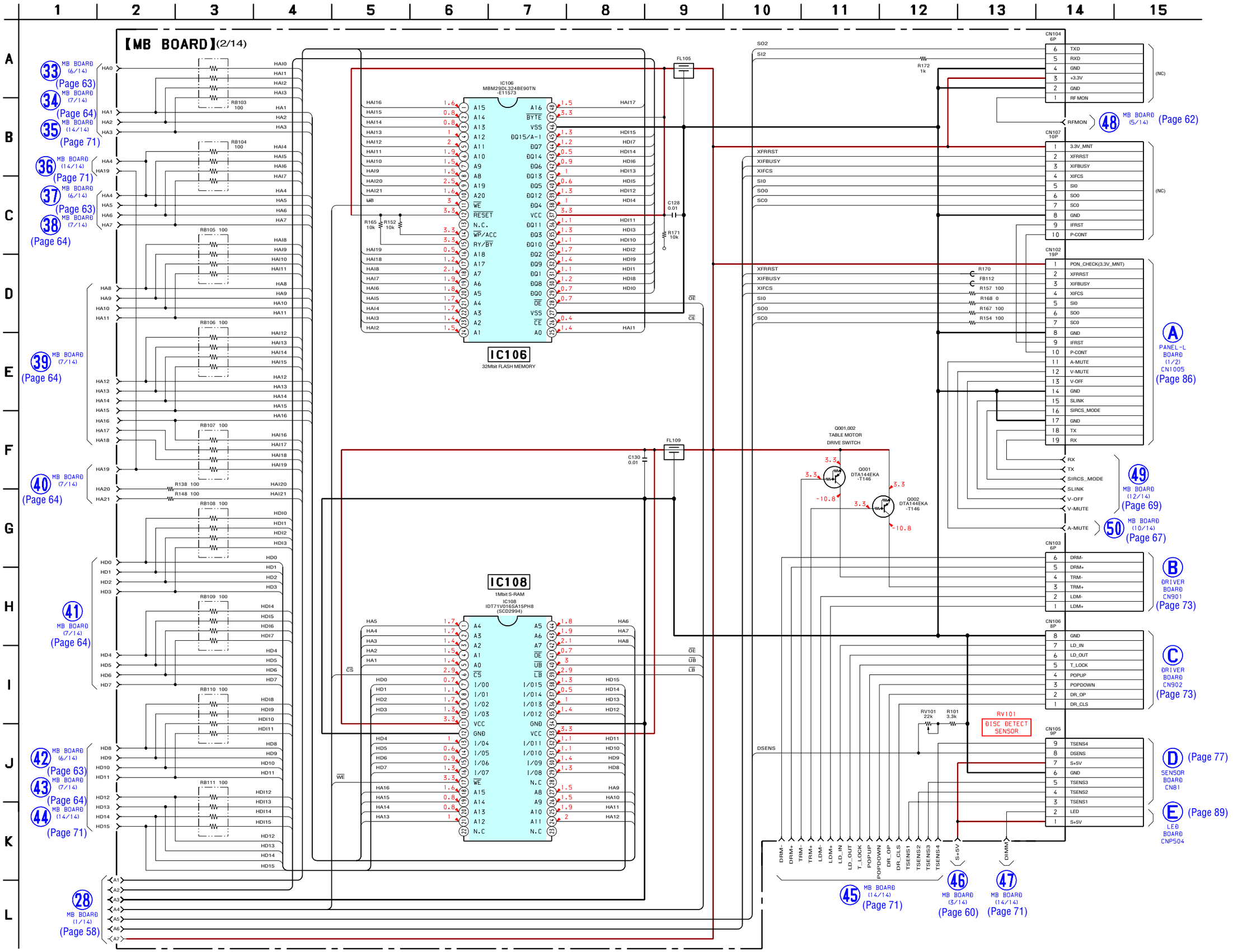
- **Semiconductor Location**

Ref. No.	Location
D101	H-14
D501	B-6
D502	B-6
D503	B-6
IC101	H-15
IC102	F-11
IC106	I-13
IC201	C-12
IC202	C-14
IC302	D-12
IC303	F-13
IC401	G-10
IC404	H-9
IC405	I-9
IC502	C-4
IC601	C-8
IC602	D-9
IC605	C-9
IC702	H-2
IC703	G-1
IC901	I-4
IC903	H-5
IC906	F-5
Q001	J-4
Q002	J-4
Q201	B-11
Q202	B-11
Q701	I-3

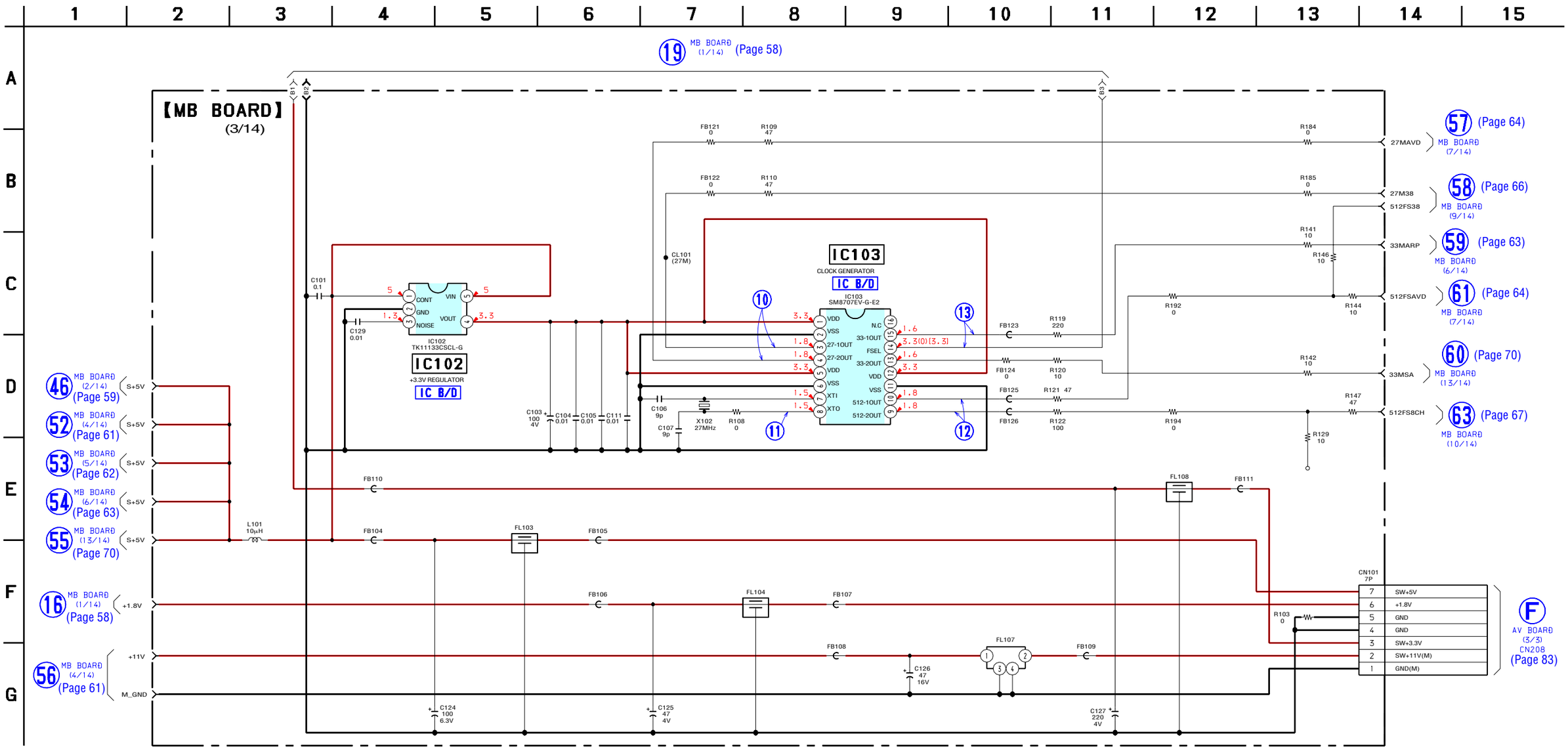
7-9. SCHEMATIC DIAGRAM – MB Board (1/14) – • See page 92 for Waveform.



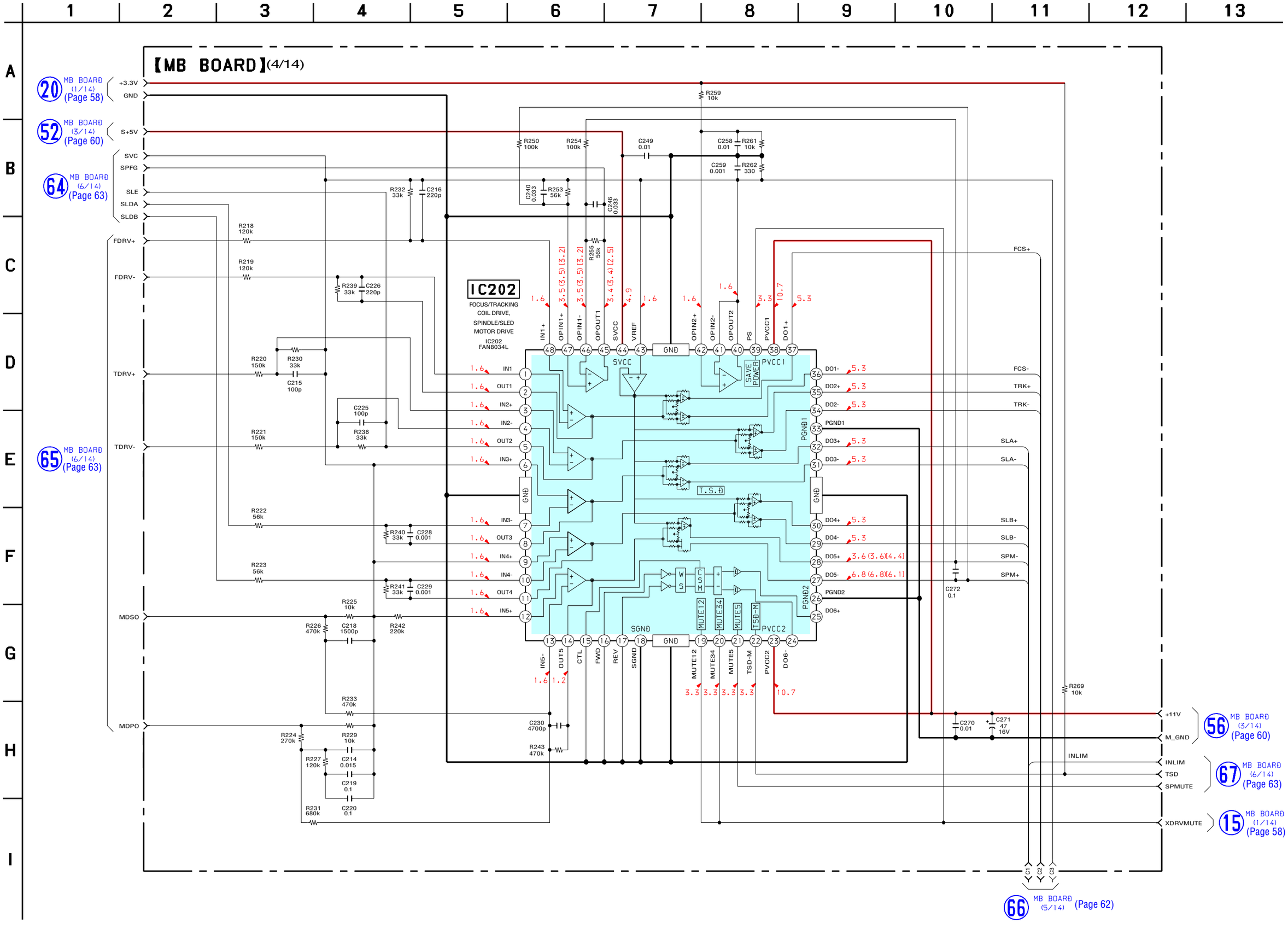
7-10. SCHEMATIC DIAGRAM – MB Board (2/14) –



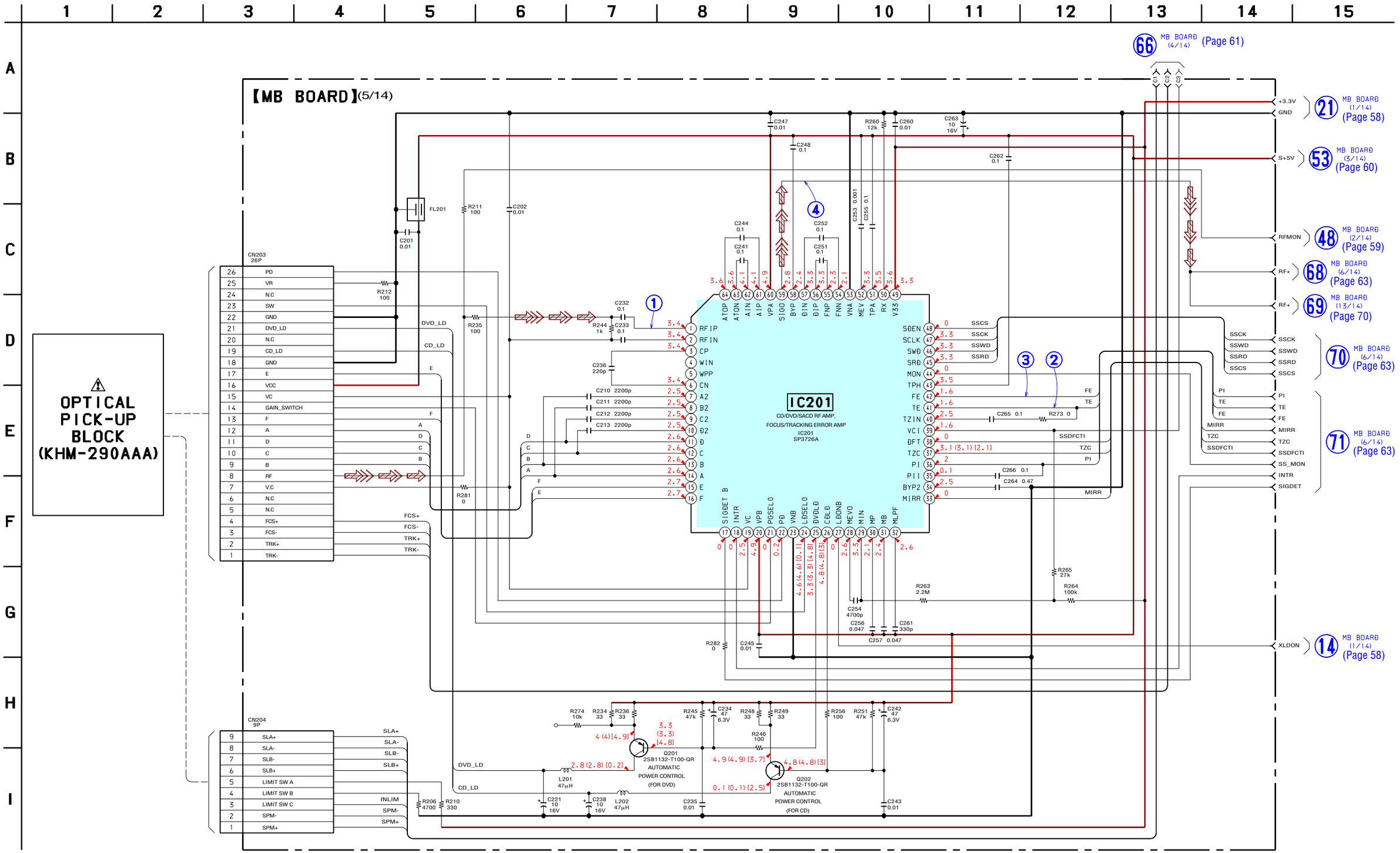
7-11. SCHEMATIC DIAGRAM – MB Board (3/14) – • See page 92 for Waveforms. • See page 96 for IC Block Diagrams.



7-12. SCHEMATIC DIAGRAM – MB Board (4/14) –



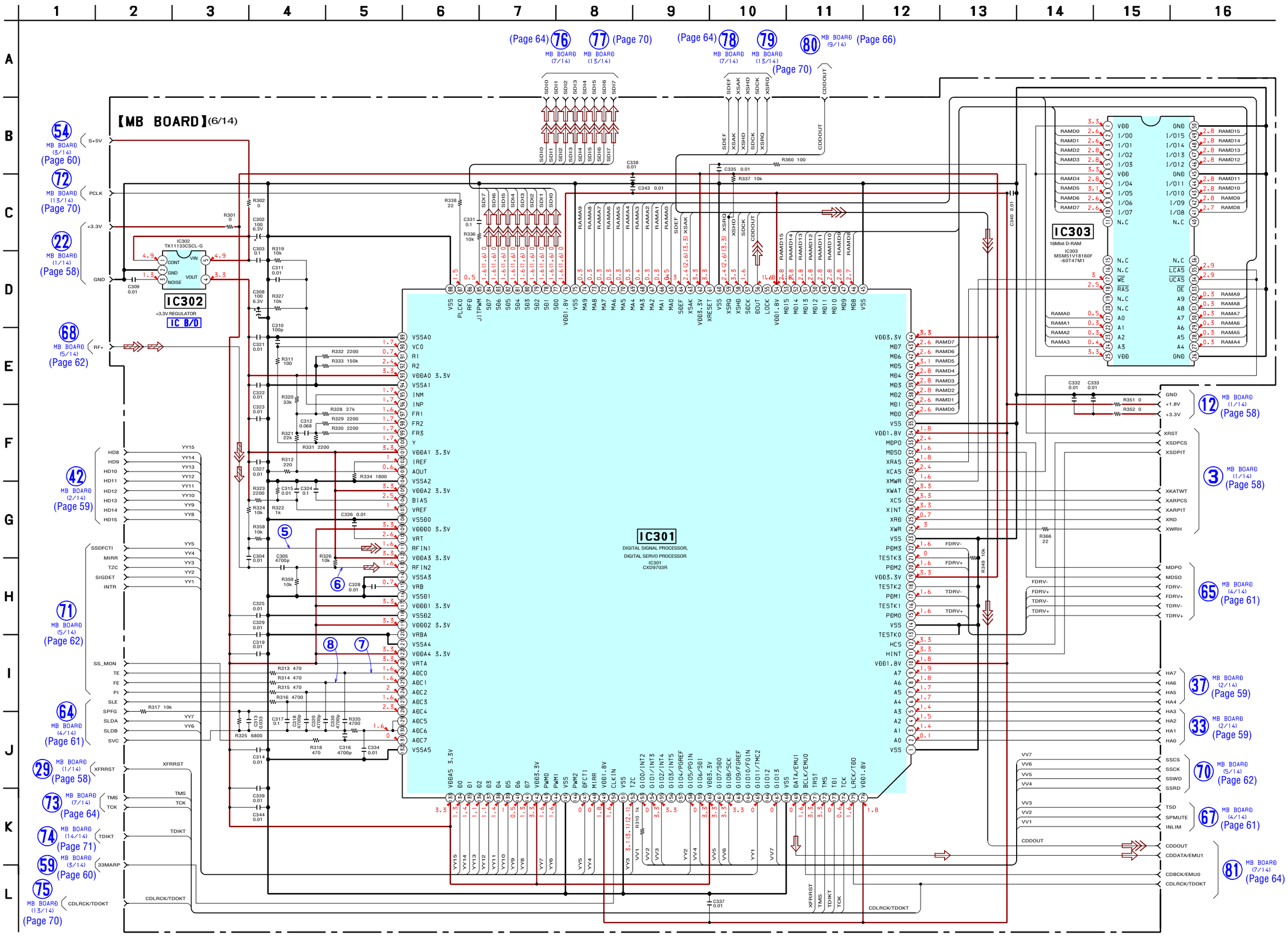
7-13. SCHEMATIC DIAGRAM – MB Board (5/14) – • See page 92 for Waveforms.



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

7-14. SCHEMATIC DIAGRAM – MB Board (6/14) –

• See page 92 for Waveforms. • See page 96 for IC Block Diagram.


【MB BOARD】(6/14)
IC301
DIGITAL SIGNAL PROCESSOR,
DIGITAL SERVO PROCESSOR
IC301
CXD9703R
IC303
16Mbit D-RAM
IC303
MSM51V18160F
-60TS47M1
IC302
TK11133CSCL-G
+3.3V REGULATOR
IC B/D
(Page 64) 76 MB BOARD (7/14) 77 MB BOARD (13/14) (Page 70)
(Page 64) 78 MB BOARD (7/14) 79 MB BOARD (13/14) 80 MB BOARD (9/14) (Page 66)
(Page 70)
54 MB BOARD (3/14) (Page 60) S+5V
72 MB BOARD (13/14) (Page 70) PCLK
22 MB BOARD (1/14) (Page 58) +3.3V
GND
68 MB BOARD (5/14) (Page 62) RF+
42 MB BOARD (2/14) (Page 59) HD8 HD9 HD10 HD11 HD12 HD13 HD14 HD15
71 MB BOARD (5/14) (Page 62) SSDFCTI MIRR TZC SIGDET INTR
64 MB BOARD (4/14) (Page 61) SS_MON TE FE PI SLE SPFG SLDA SLDB SVC
29 MB BOARD (1/14) (Page 58) XFRRST
73 MB BOARD (7/14) (Page 64) TMS TCK
74 MB BOARD (14/14) (Page 71) TDIKT
59 MB BOARD (3/14) (Page 60) 33MARP
75 MB BOARD (13/14) (Page 70) CDLRCK/TDOKT
12 MB BOARD (1/14) (Page 58) GND +1.8V +3.3V
3 MB BOARD (1/14) (Page 58) XRST XSDPCS XSDPIT XKATWT XARPCS XARPIT XRD XWRH
65 MB BOARD (4/14) (Page 61) MDPO MDSO FDRV- FDRV+ TDRV- TDRV+
37 MB BOARD (2/14) (Page 59) HA7 HA6 HA5 HA4
33 MB BOARD (2/14) (Page 59) HA3 HA2 HA1 HA0
70 MB BOARD (5/14) (Page 62) SSCS SSCK SSWD SSRD
67 MB BOARD (4/14) (Page 61) TSD SPMUTE INLIM
81 MB BOARD (7/14) (Page 64) CDDOUT CDDATA/EMU1 CDBCK/EMU0 CDLRCK/TDOKT
SDI0 SDI1 SDI2 SDI3 SDI4 SDI5 SDI6 SDI7
SDEF XSAK XSHD SDCK XSRQ CDDOUT
RAMD0 RAMD1 RAMD2 RAMD3 RAMD4 RAMD5 RAMD6 RAMD7 RAMD8 RAMD9 RAMD10 RAMD11 RAMD12 RAMD13 RAMD14 RAMD15
RAMA0 RAMA1 RAMA2 RAMA3 RAMA4 RAMA5 RAMA6 RAMA7 RAMA8 RAMA9
VSSA0 VCO R1 R2 VDDA0 3.3V VSSA1 INM INP FR1 FR2 FR3 Y VDDA1 3.3V IREF AOUT VSSA2 VDDA2 3.3V BIAS VREF VSSD0 VDDD0 3.3V VRT RFIN1 VDDA3 3.3V RFIN2 VSSA3 VRB VSSD1 VDDD1 3.3V VSSD2 VDDD2 3.3V VRBA VSSA4 VDDA4 3.3V VRTA ADC0 ADC1 ADC2 ADC3 ADC4 ADC5 ADC6 ADC7 VSSA5
VDDA5 3.3V D0 D1 D2 D3 D4 D5 D6 D7 VDD3.3V PWM0 PWM1 VSS PWM2 DFCT1 MIRR VDD1.8V CLKIN VSS TZC GIO0/INT2 GIO1/INT3 GIO2/INT4 GIO3/INT5 GIO4/PGREF GIO5/PGIN GIO6/SDI VDD3.3V GIO7/SDO GIO8/SCK GIO9/FGREF GIO10/FGIN GIO11/TMC2 GIO12 GIO13 VSS DATA/EMU1 BCLK/EMU0 TRST TMS TDI TCK LRCK/TDO VDD1.8V
VDD3.3V MD7 MD6 MD5 MD4 MD3 MD2 MD1 MD0 VSS VDD1.8V MDPO MDSO XRAS XCAS XMWR XWAT XCS XINT XRD XWR VSS PDM3 TESTK3 PDM2 VDD3.3V TESTK2 PDM1 TESTK1 PDM0 VSS TESTK0 HCS HINT VDD1.8V A7 A6 A5 A4 A3 A2 A1 A0 VSS
VDD I/O0 I/O1 I/O2 I/O3 VDD I/O4 I/O5 I/O6 I/O7 N.C N.C WE RAS N.C N.C A0 A1 A2 A3 VDD GND I/O15 I/O14 I/O13 I/O12 GND I/O11 I/O10 I/O9 I/O8 N.C N.C LCAS UCAS OE A9 A8 A7 A6 A5 A4 GND
R302 0
R301 0
R303 0.1
R319 10k
R311 100
R327 10k
R332 2200
R333 150k
R328 27k
R329 2200
R330 2200
R331 2200
R334 1800
R312 220
R322 1k
R324 10k
R358 10k
R326 10k
R359 10k
R313 470
R314 470
R315 470
R316 4700
R317 10k
R325 6800
R318 470
R310 1k
R338 22
R336 10k
R360 100
R337 10k
R351 0
R352 0
R366 22
R349 10k
C309 0.01
C311 0.01
C308 100 6.3V
C310 100p
C321 0.01
C322 0.01
C323 0.01
C312 0.068
C327 0.01
C315 0.01
C324 0.1
C326 0.01
C305 4700p
C328 0.01
C325 0.01
C329 0.01
C319 0.01
C317 0.1
C318 4700p
C320 4700p
C330 4700p
C335 4700p
C316 4700p
C334 0.01
C314 0.01
C339 0.01
C344 0.01
C331 0.1
C343 0.01
C338 0.01
C335 0.01
C349 0.01
C332 0.01
C333 0.01
C337 0.01
5
6
7
8

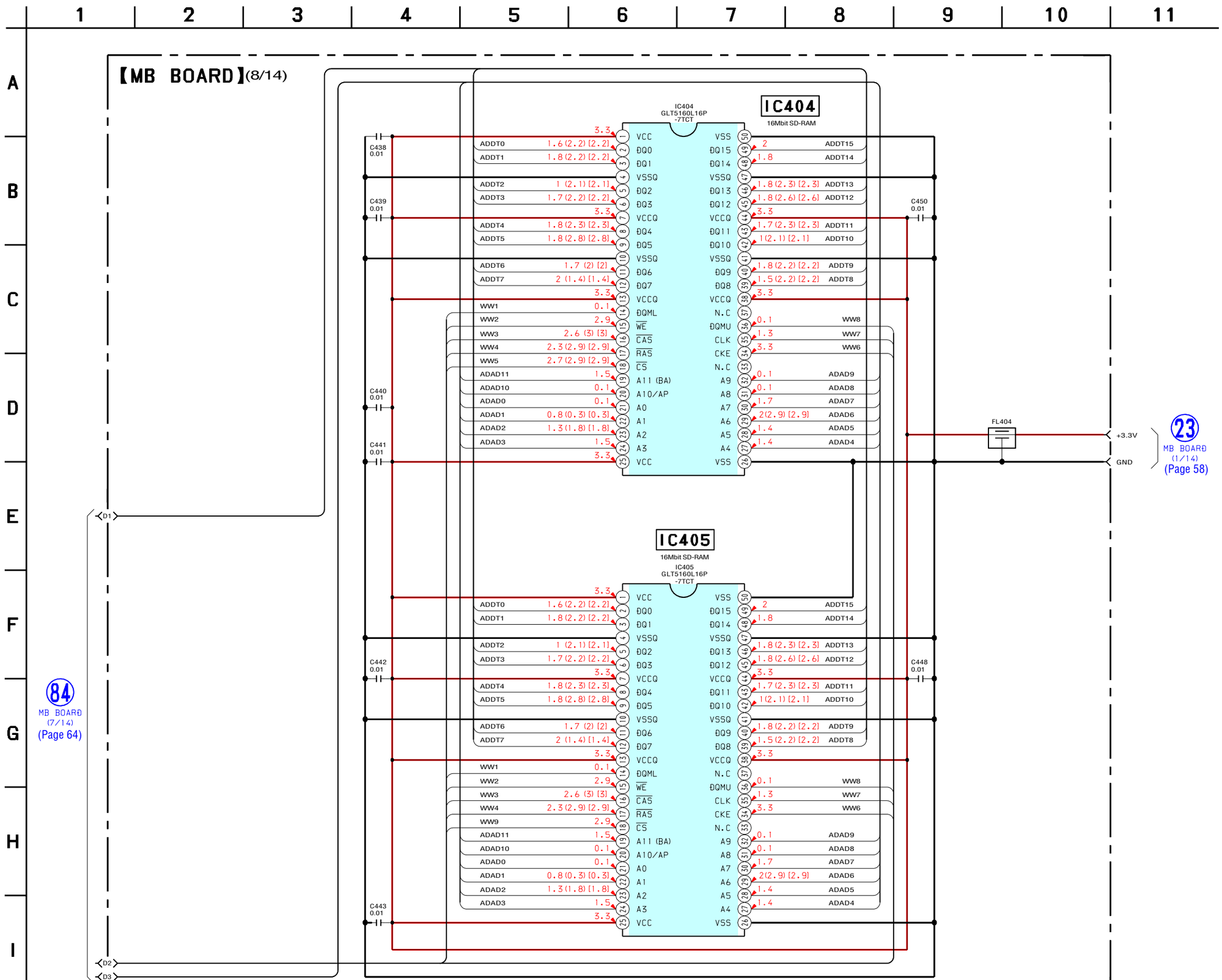
7-15. SCHEMATIC DIAGRAM – MB Board (7/14) – • See page 96 for IC Block Diagram.

【MB BOARD】
(7/14)

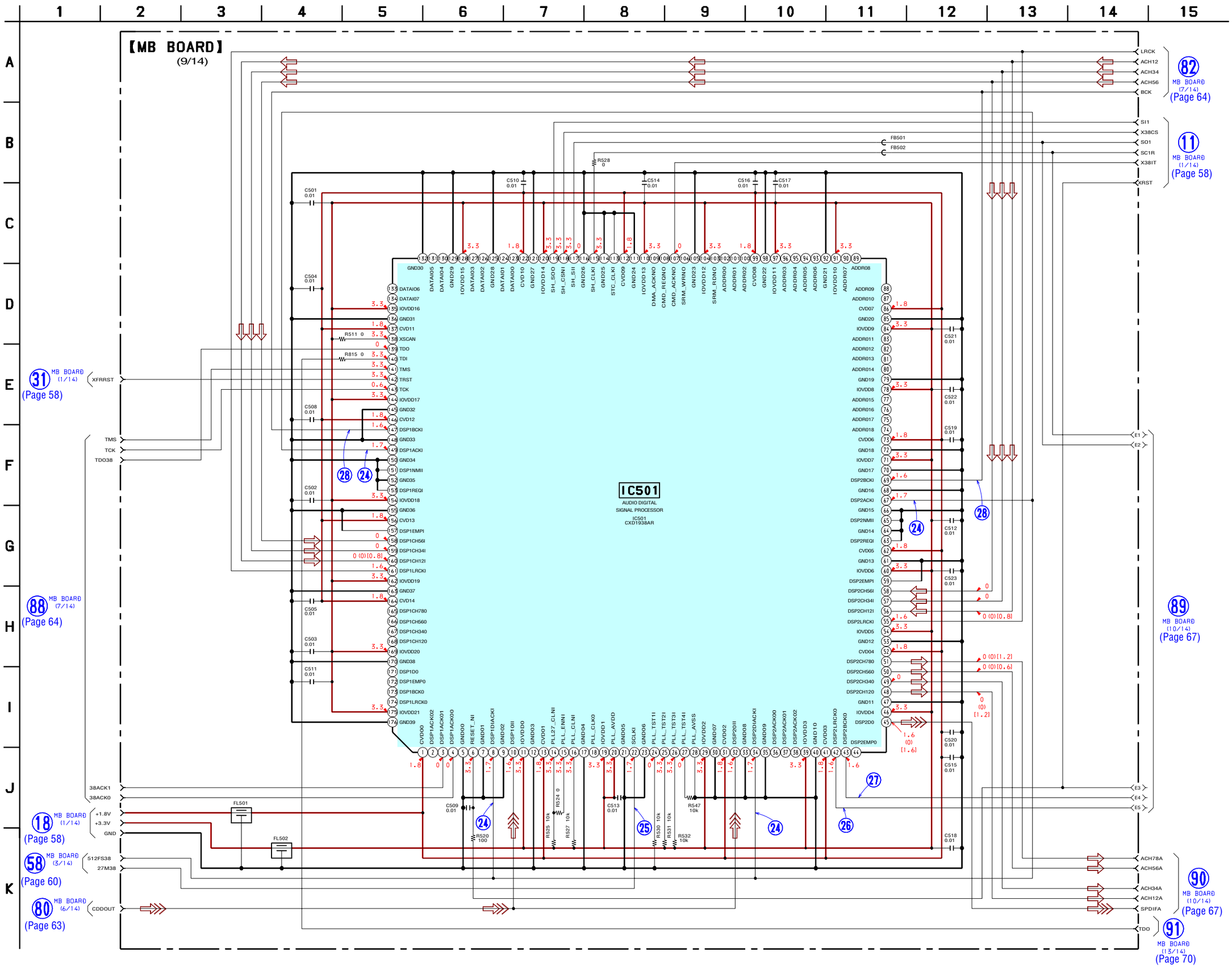
IC403
AV DECODER
IC403
CXD1935Q

IC401
TK11118CSCL-G
+1.8V REGULATOR
IC B/D

7-16. SCHEMATIC DIAGRAM – MB Board (8/14) –

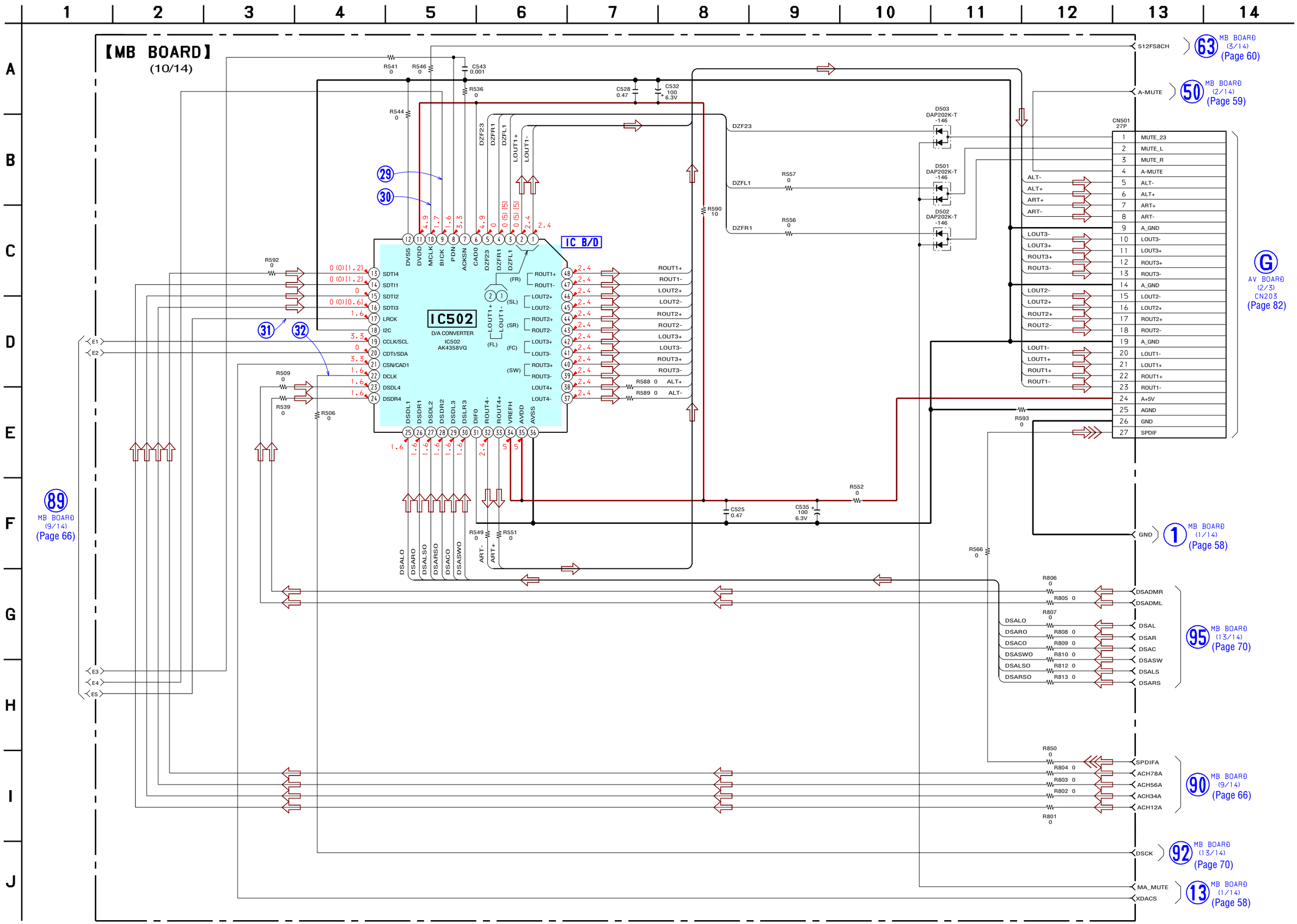


7-17. SCHEMATIC DIAGRAM – MB Board (9/14) – • See page 92 for Waveforms.

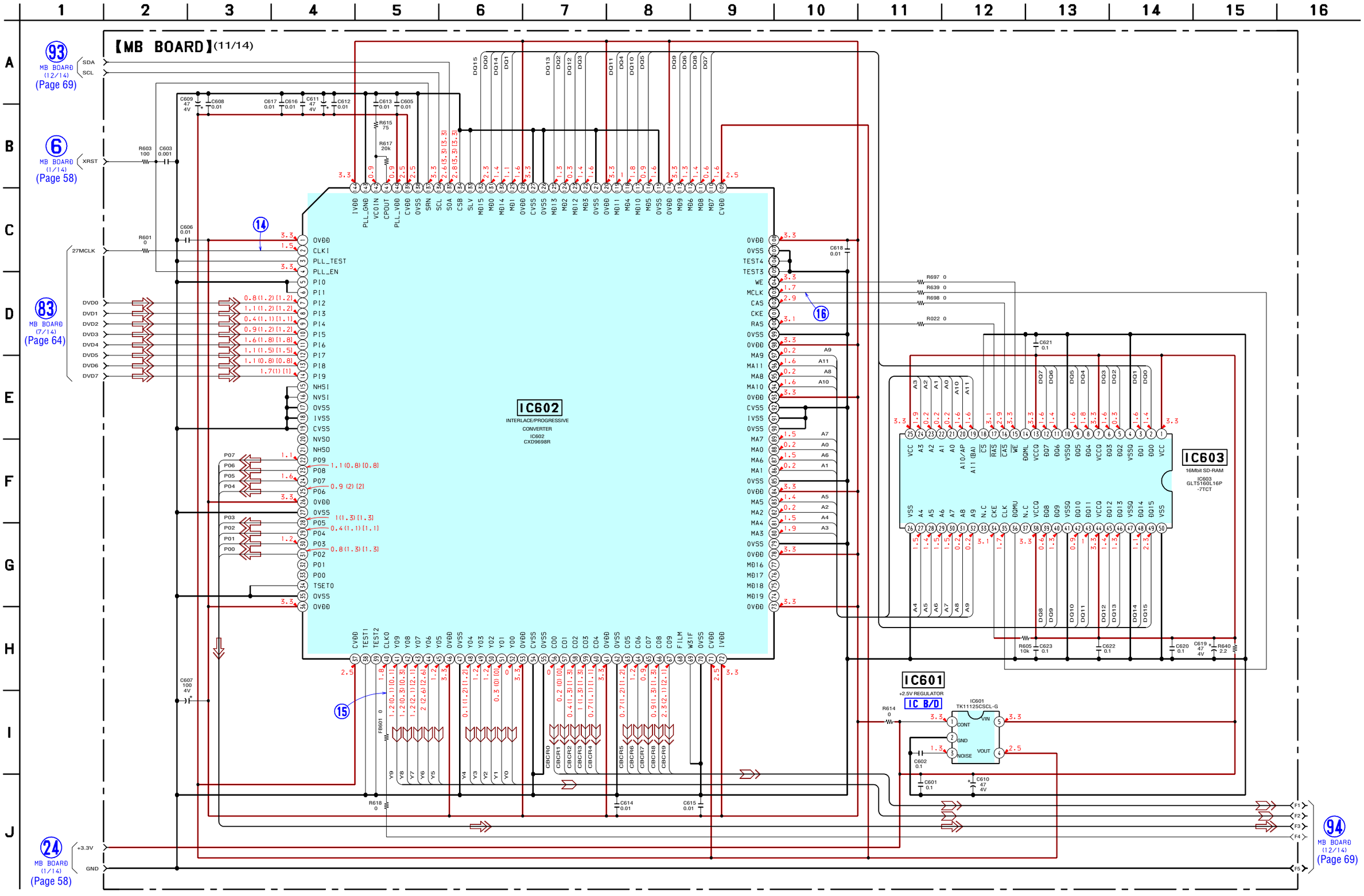


7-18. SCHEMATIC DIAGRAM – MB Board (10/14) –

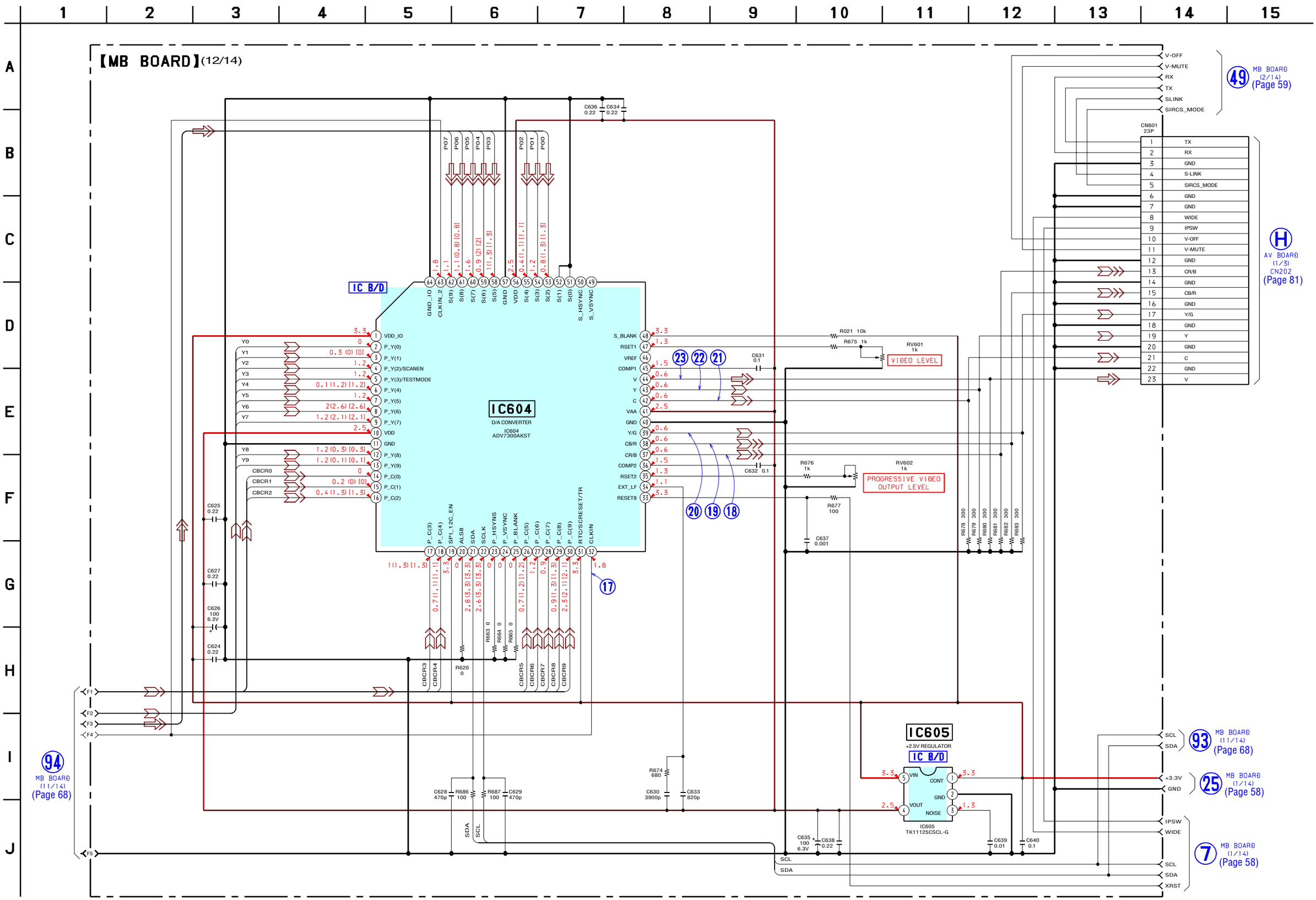
• See page 92 for Waveforms. • See page 96 for IC Block Diagram.



7-19. SCHEMATIC DIAGRAM – MB Board (11/14) – • See page 92 for Waveforms. • See page 96 for IC Block Diagram.



7-20. SCHEMATIC DIAGRAM – MB Board (12/14) – • See page 92 for Waveforms. • See page 96 for IC Block Diagrams.



7-21. SCHEMATIC DIAGRAM – MB Board (13/14) – • See page 92 for Waveforms. • See page 96 for IC Block Diagram.

【MB BOARD】(13/14)

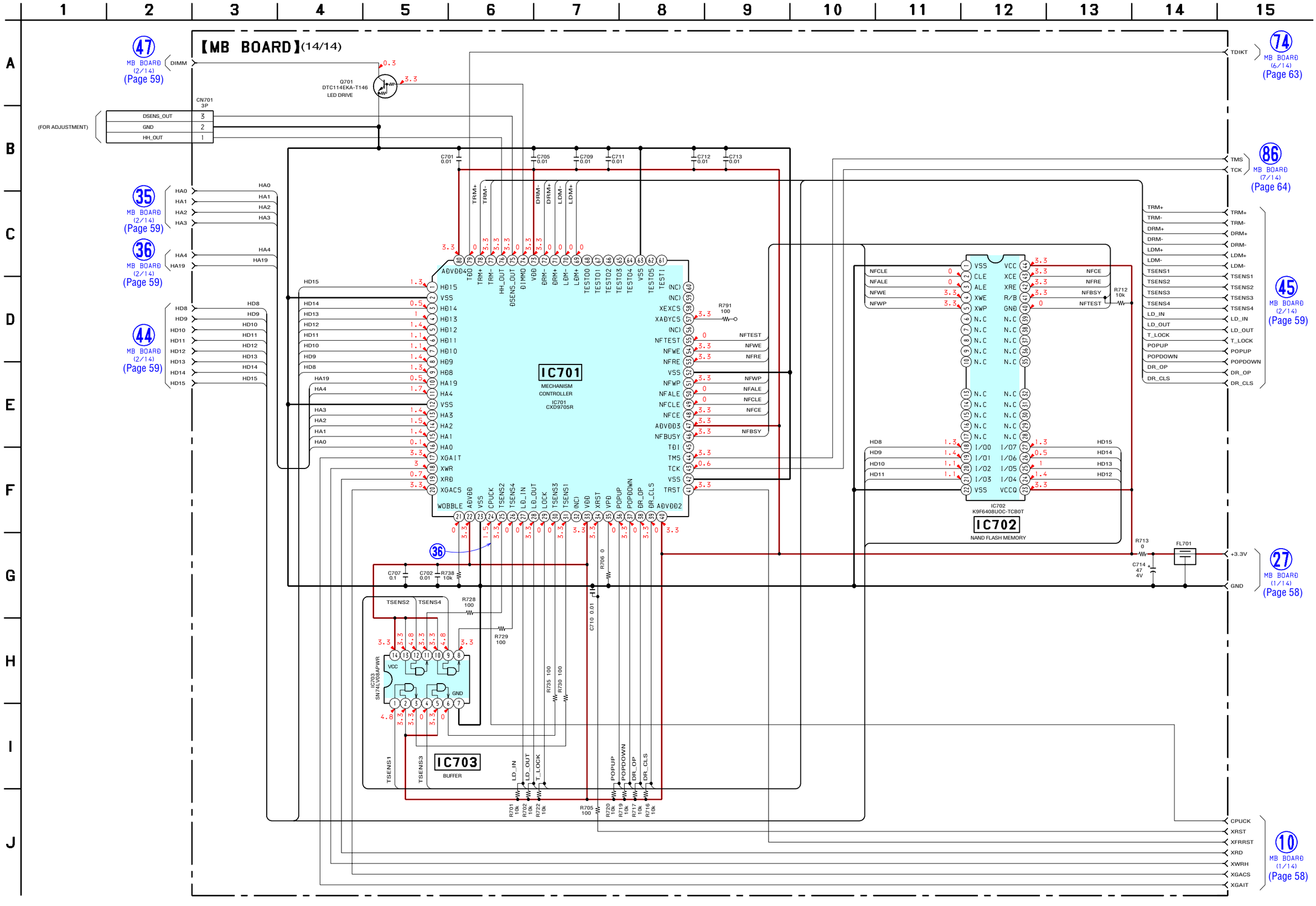
IC903 16Mbit SD-RAM

IC905 DSD DECODER IC905 CXD2753R

IC906 RF BUFFER IC906 LMH6642MFX/NOPB

IC901 +2.5V REGULATOR IC B/D IC901 TK11225CMCL-G

7-22. SCHEMATIC DIAGRAM – MB Board (14/14) – • See page 92 for Waveform.

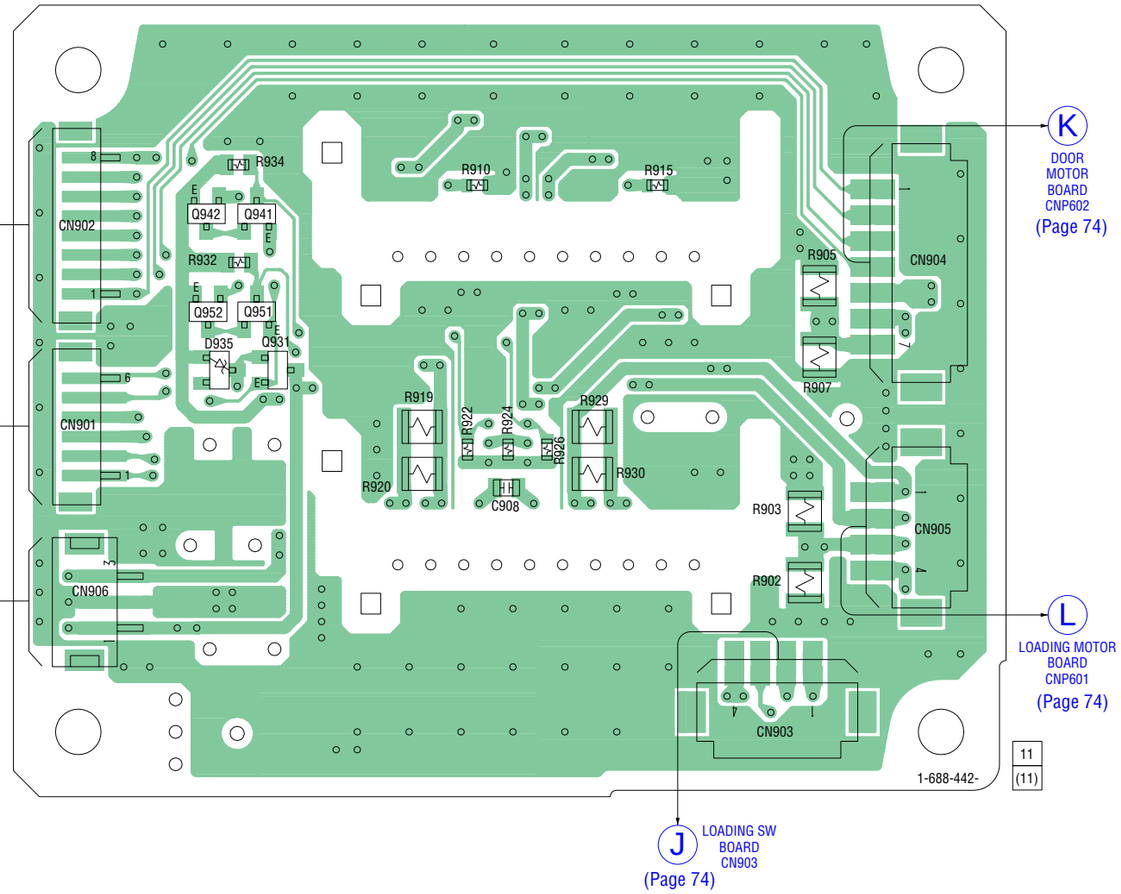


7-23. PRINTED WIRING BOARD – DRIVER Board –

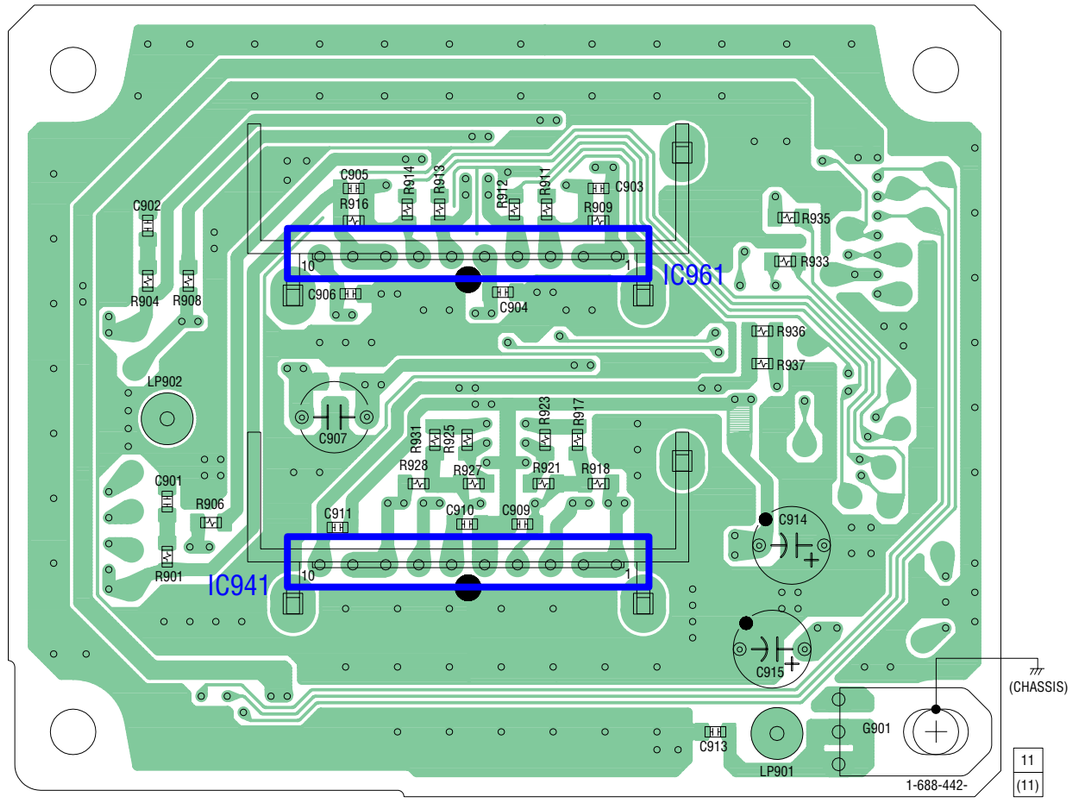
• See page 55 for Circuit Boards Location.

:Uses unleaded solder.

【DRIVER BOARD】(COMPONENT SIDE)



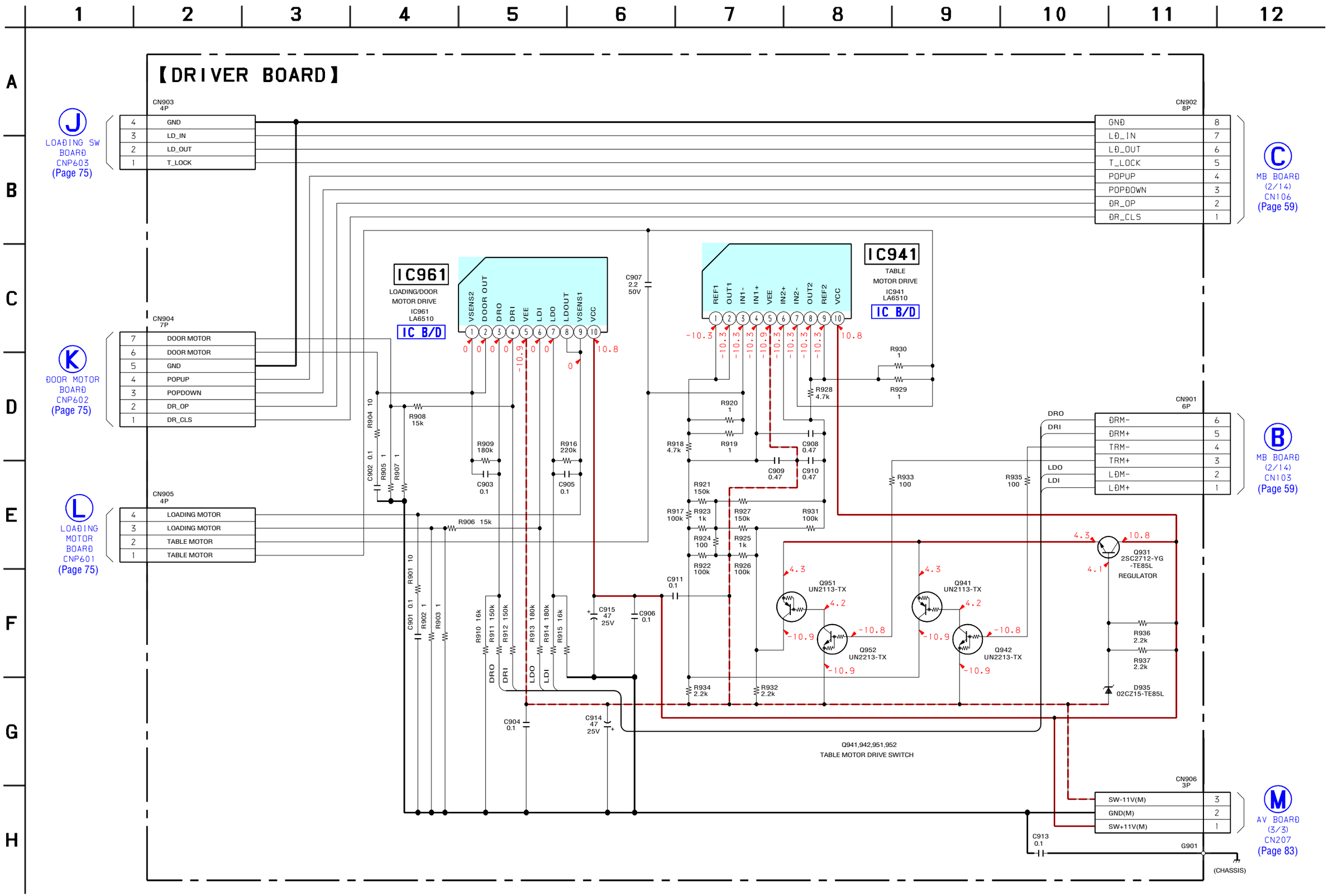
【DRIVER BOARD】(CONDUCTOR SIDE)



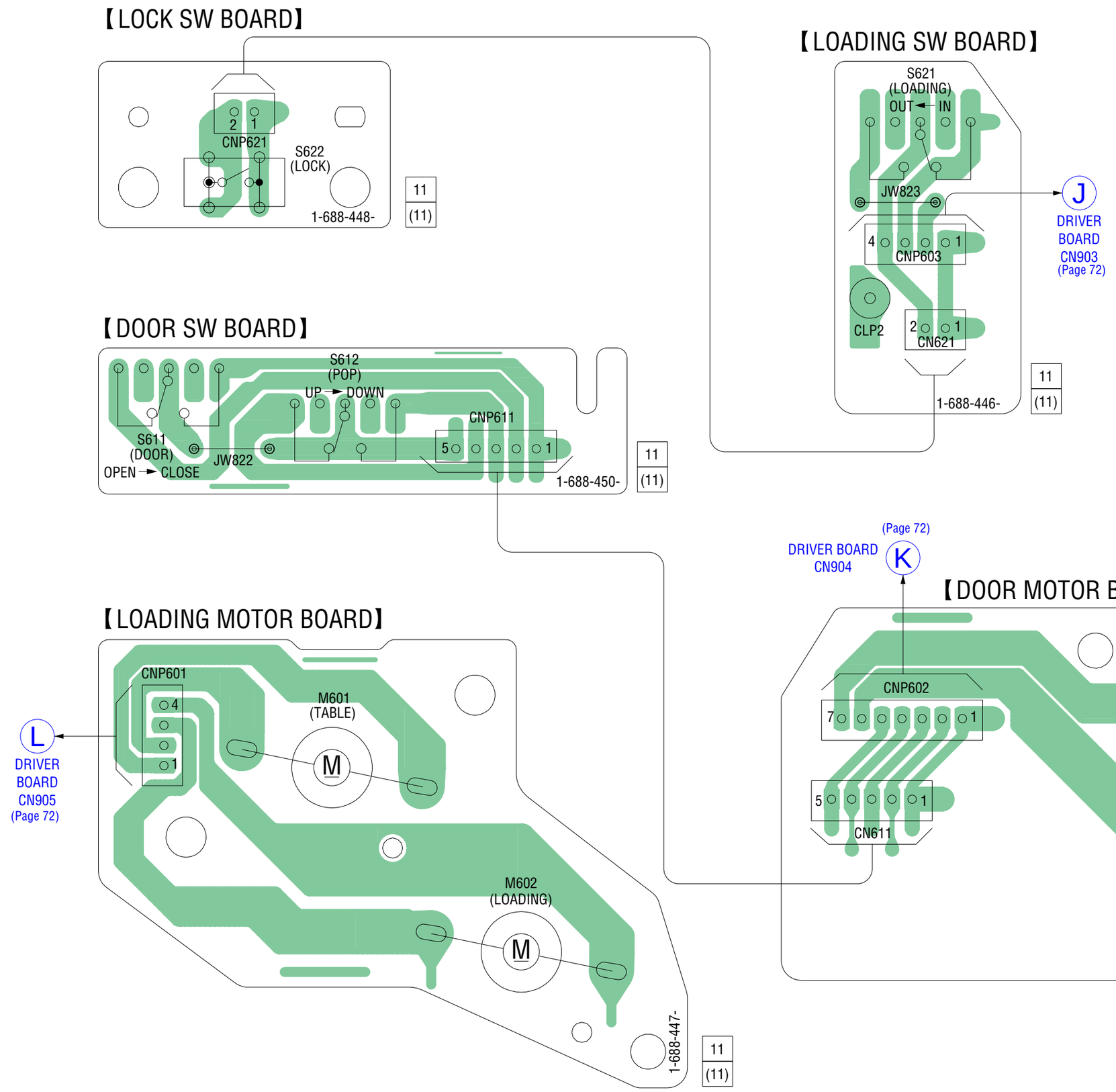
- **Semiconductor Location**

Ref. No.	Location
D935	C-3
IC941	E-11
IC961	C-11
Q931	C-3
Q941	B-3
Q942	B-3
Q951	C-3
Q952	C-3

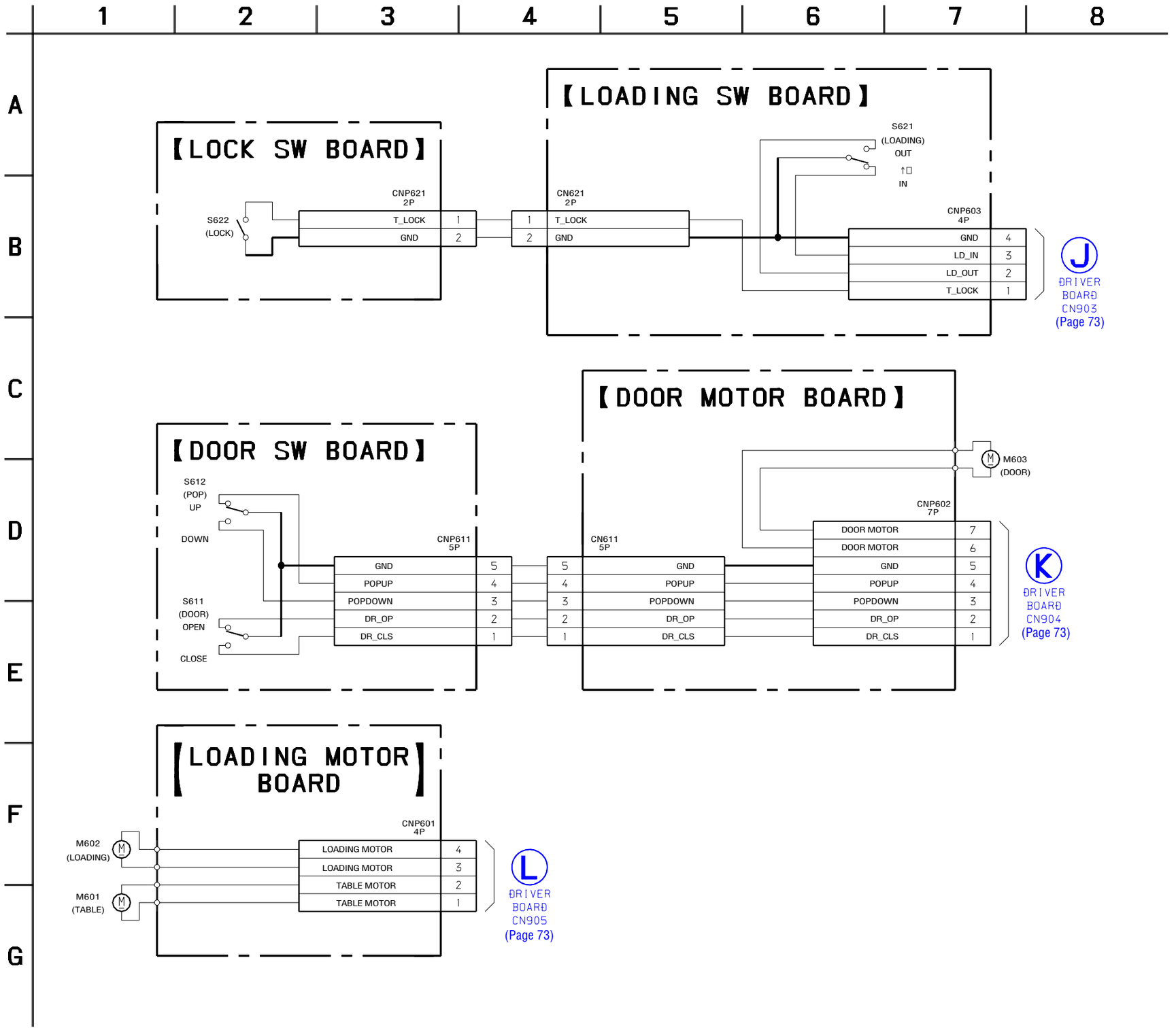
7-24. SCHEMATIC DIAGRAM – DRIVER Board – • See page 96 for IC Block Diagrams.



7-25. PRINTED WIRING BOARDS – MOTOR/SWITCH Section – • See page 55 for Circuit Boards Location. **:Uses unleaded solder.**



7-26. SCHEMATIC DIAGRAM – MOTOR/SWITCH Section –

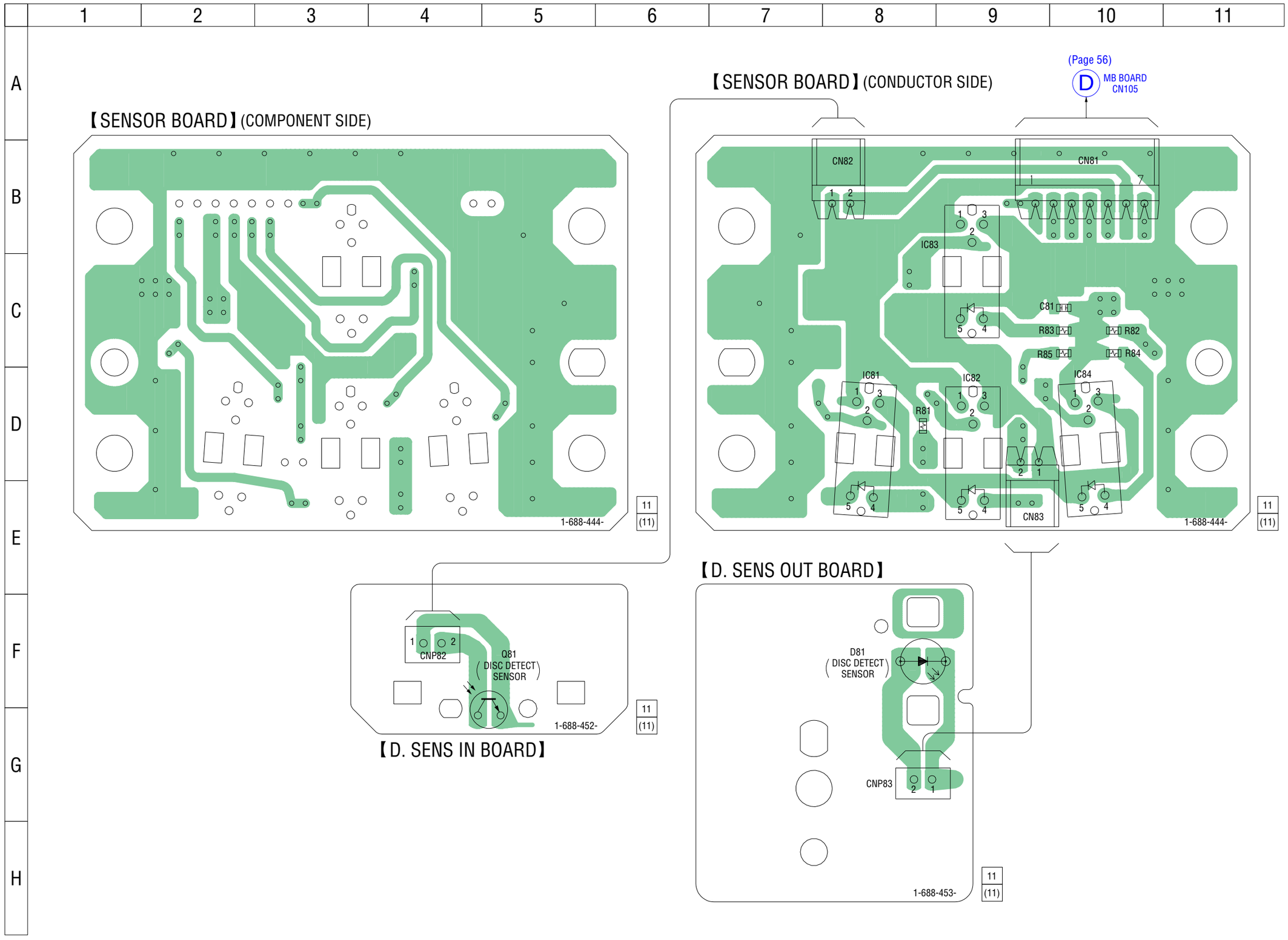


7-27. PRINTED WIRING BOARDS – SENSOR Section –

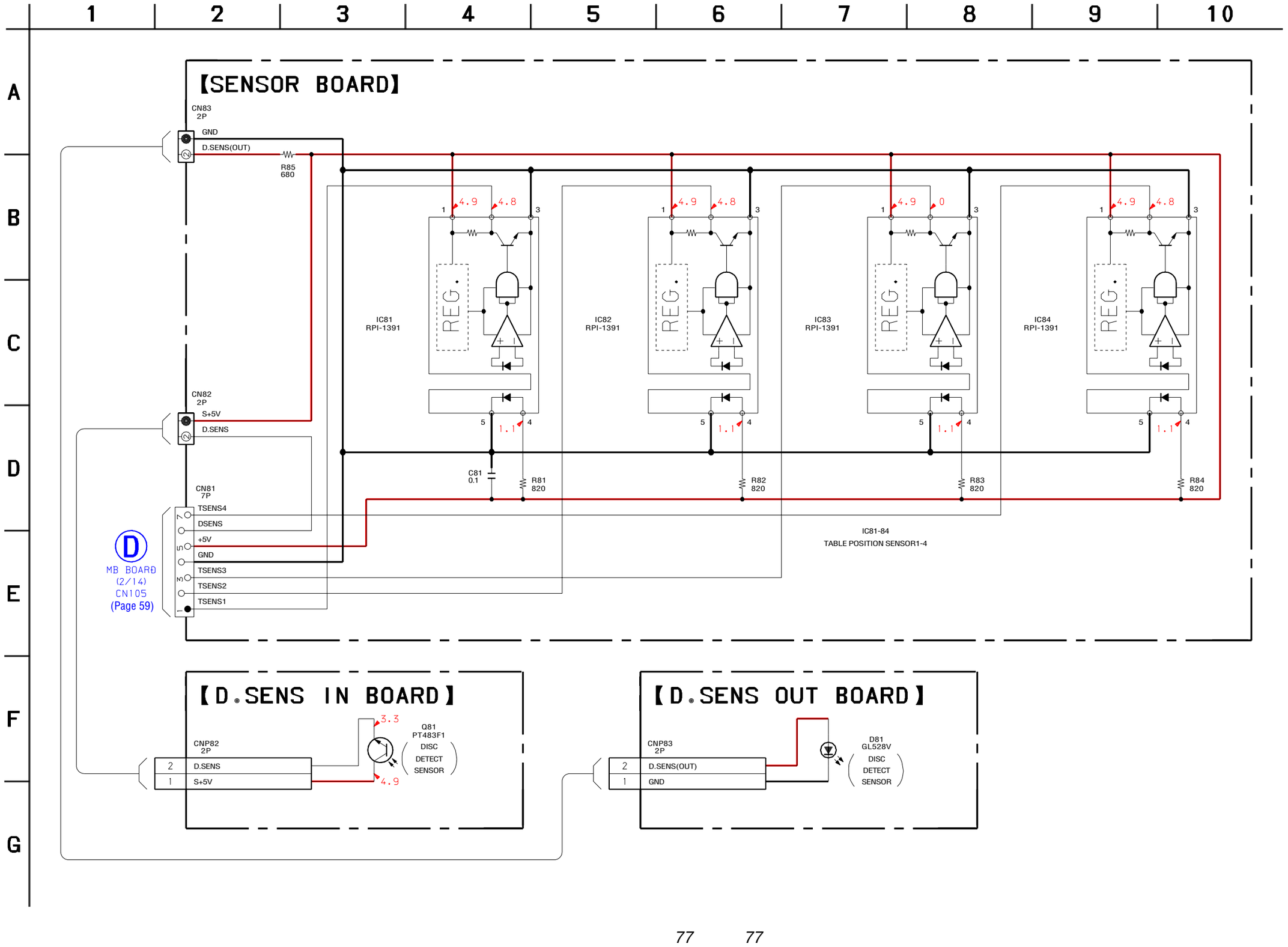
• See page 55 for Circuit Boards Location. :Uses unleaded solder.

- **Semiconductor Location**

Ref. No.	Location
D81	F-8
IC81	D-8
IC82	D-9
IC83	D-10
IC84	C-9
Q81	G-5



7-28. SCHEMATIC DIAGRAM – SENSOR Section –



7-29. PRINTED WIRING BOARD – AV Board (Component Side) –

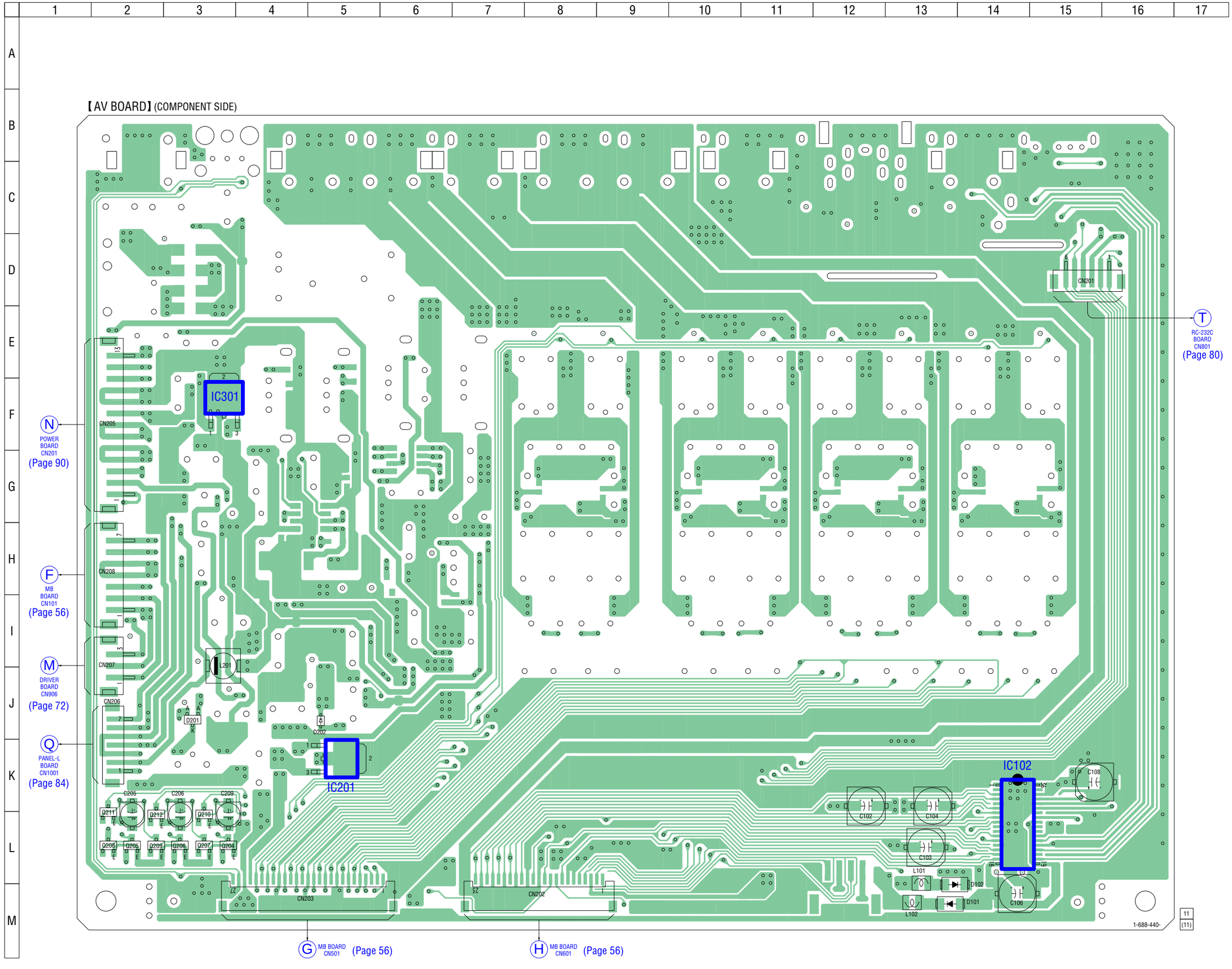
• See page 55 for Circuit Boards Location.

:Uses unleaded solder.

- **Semiconductor Location**

Ref. No.	Location
D101	M-13
D102	M-13
D201	J-3
D202	J-5
IC102	L-14
IC201	K-5
IC301	F-3
Q204	L-3
Q205	L-2
Q206	L-3
Q207	L-3
Q208	L-2
Q209	L-2
Q210	L-3
Q211	L-2
Q212	L-2

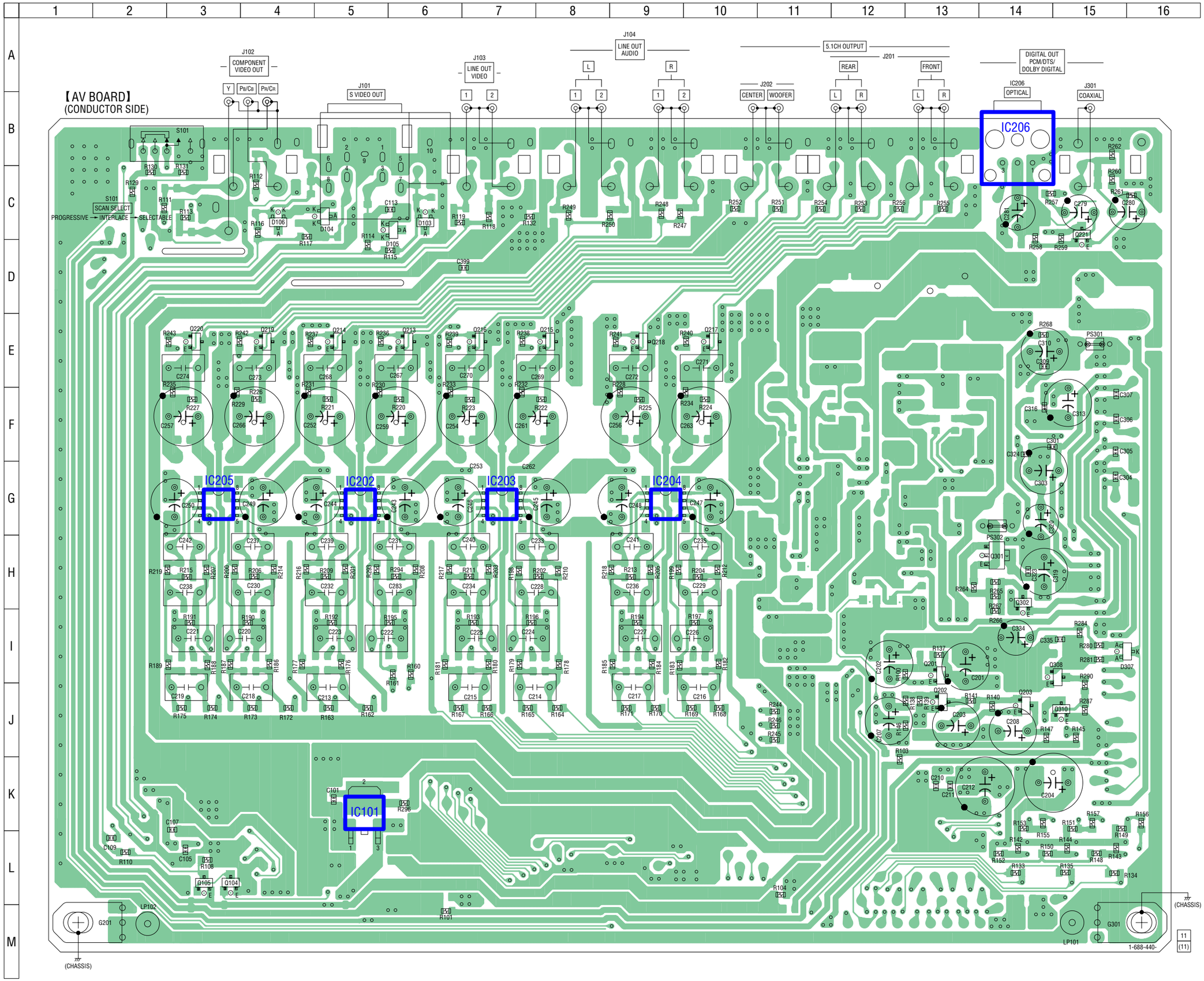
【AV BOARD】(COMPONENT SIDE)



7-30. PRINTED WIRING BOARD – AV Board (Conductor Side) –

• See page 55 for Circuit Boards Location.

:Uses unleaded solder.



- **Semiconductor Location**

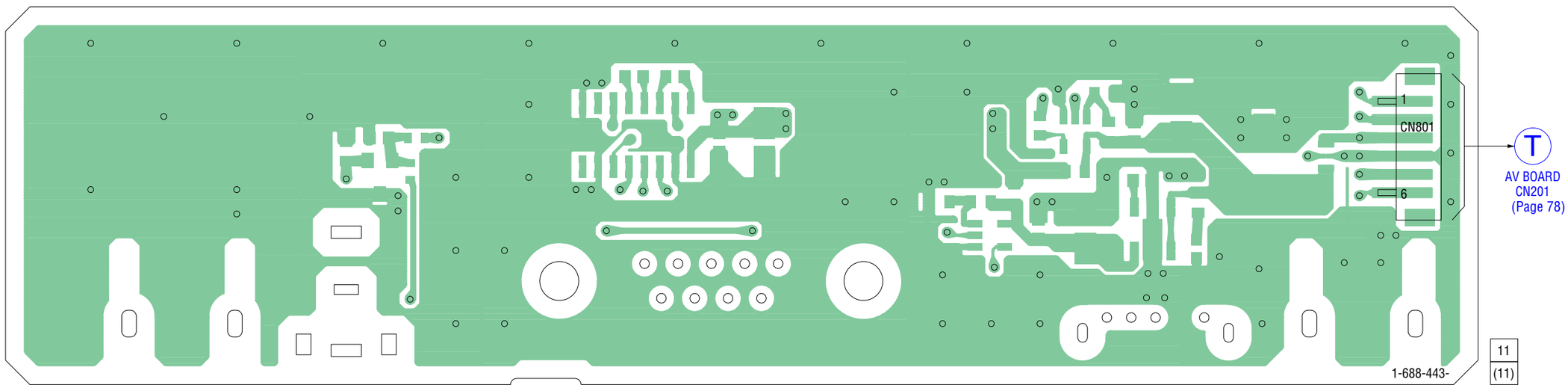
Ref. No.	Location
D103	C-6
D104	C-5
D105	C-6
D106	C-4
D307	I-16
IC101	K-5
IC202	G-5
IC203	G-7
IC204	G-9
IC205	G-3
IC206	B-14
Q104	L-3
Q105	L-3
Q201	I-13
Q202	J-13
Q203	J-14
Q213	E-6
Q214	E-5
Q215	E-8
Q216	E-7
Q217	E-10
Q218	E-9
Q219	E-4
Q220	E-3
Q221	C-15
Q301	H-14
Q302	H-14
Q308	I-15
Q310	J-15

7-31. PRINTED WIRING BOARD – RS-232C Board –

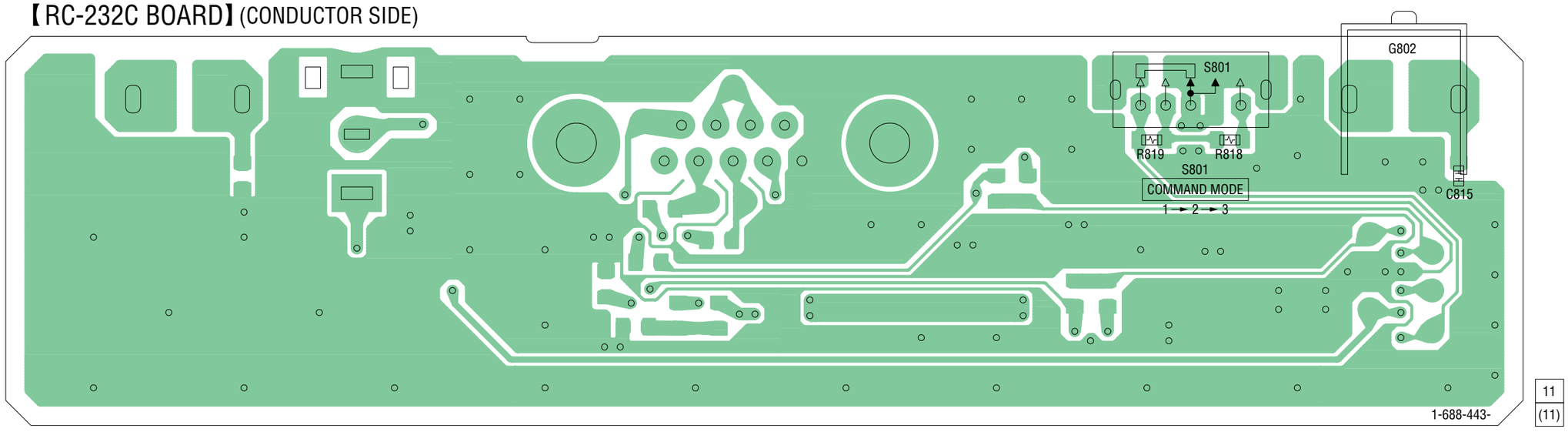
• See page 55 for Circuit Boards Location.

:Uses unleaded solder.

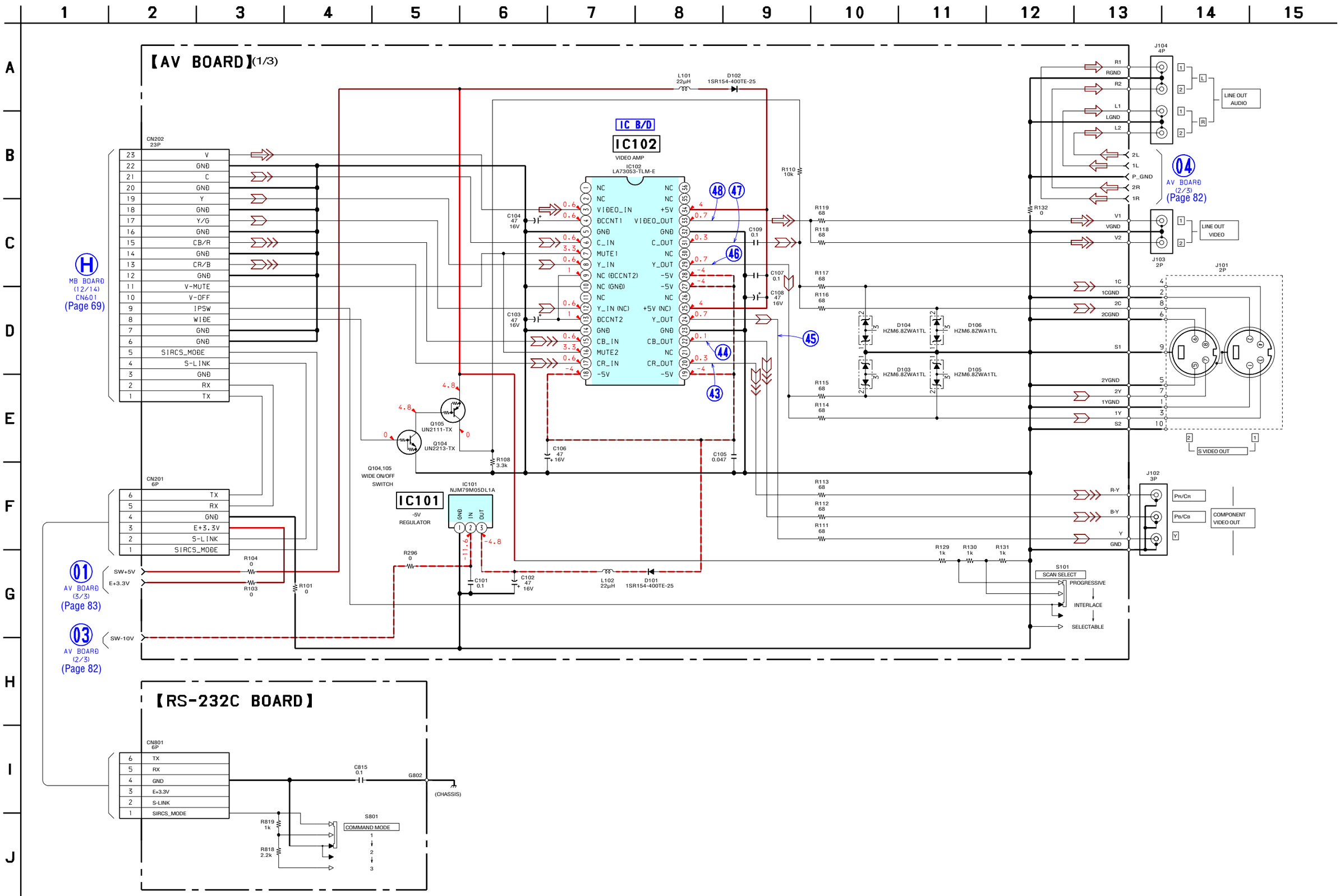
【RC-232C BOARD】(COMPONENT SIDE)



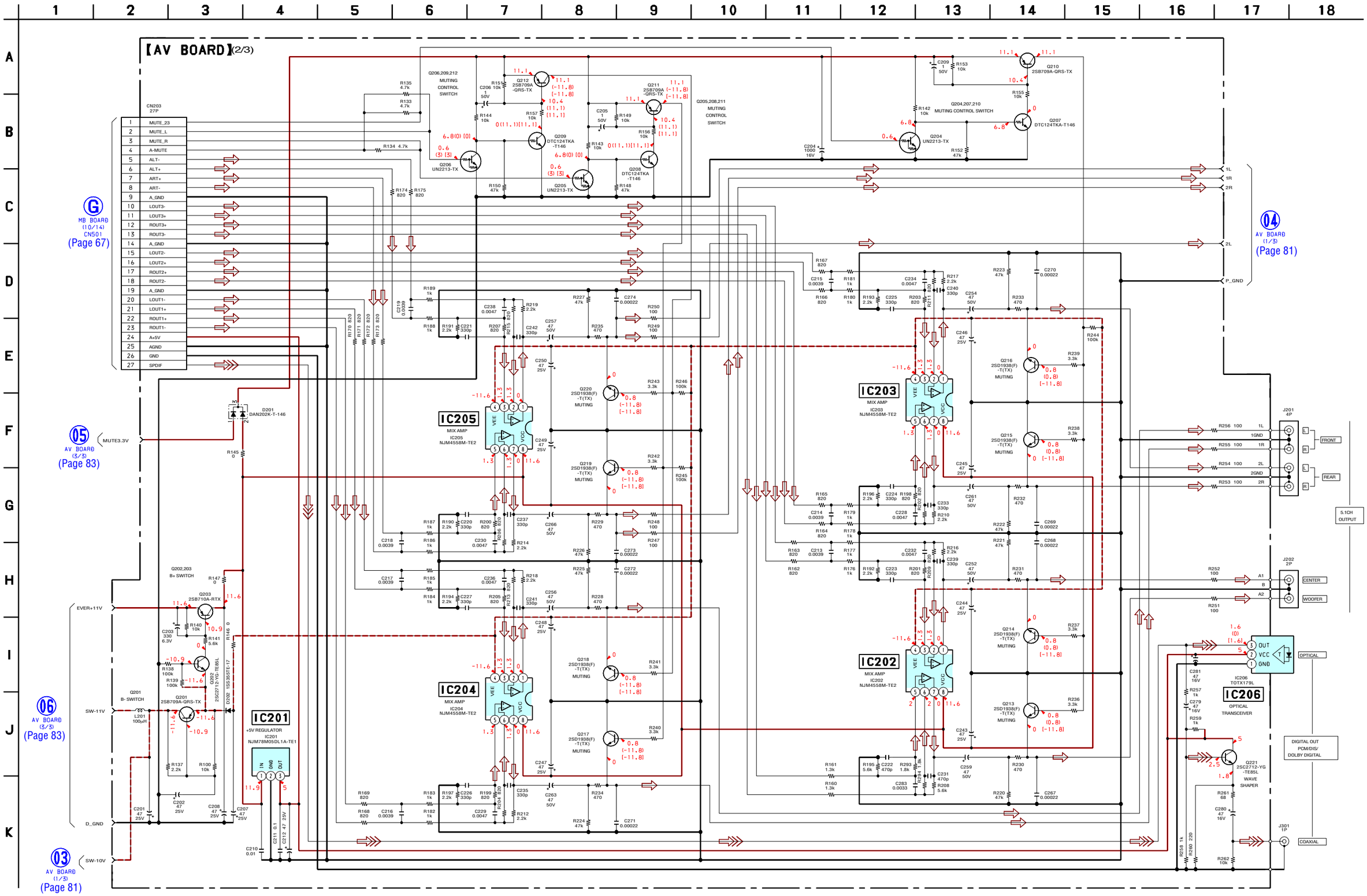
【RC-232C BOARD】(CONDUCTOR SIDE)



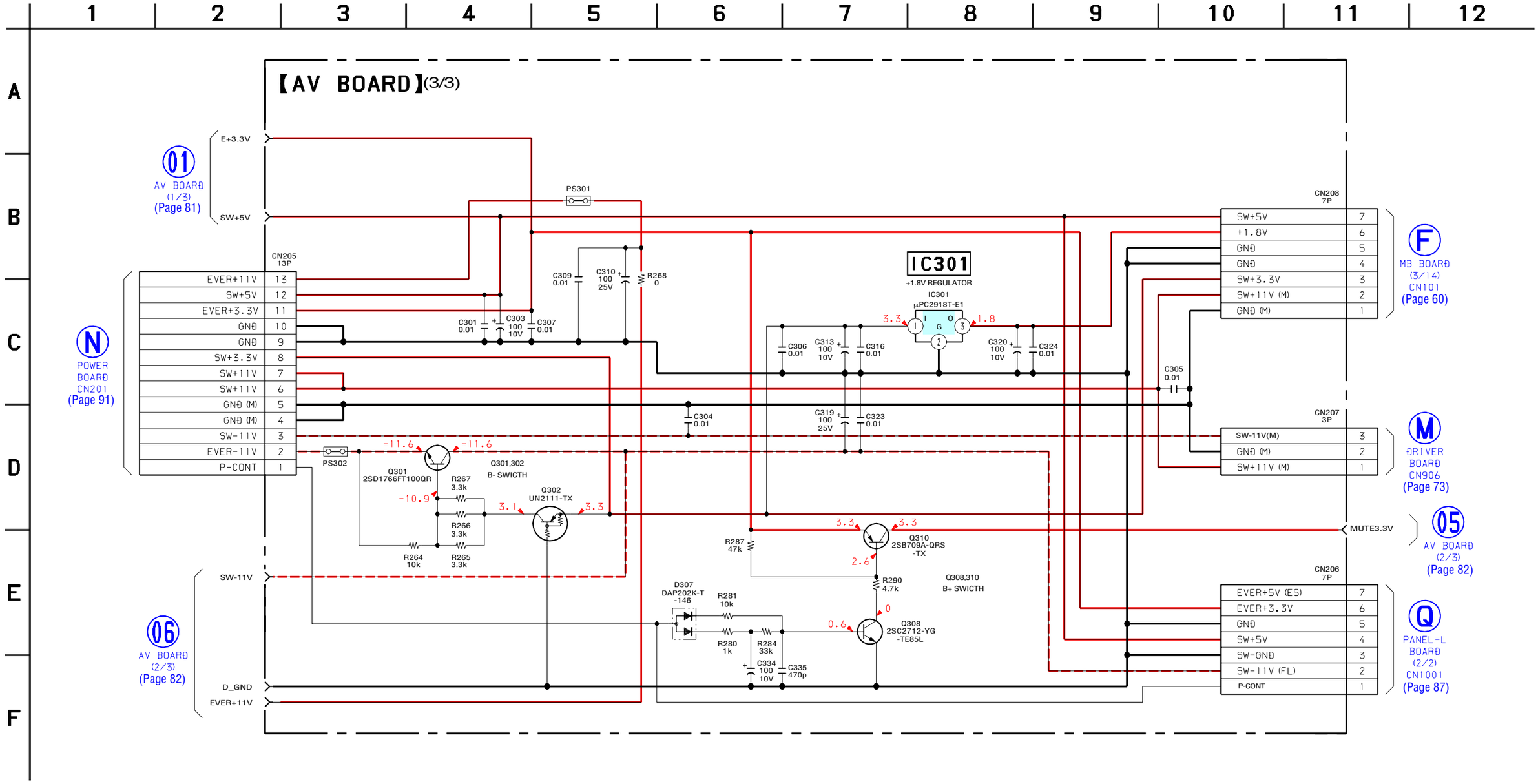
7-32. SCHEMATIC DIAGRAM – AV (1/3)/RS-232C Boards – • See page 92 for Waveforms. • See page 96 for IC Block Diagram.



7-33. SCHEMATIC DIAGRAM – AV Board (2/3) –



7-34. SCHEMATIC DIAGRAM – AV Board (3/3) –



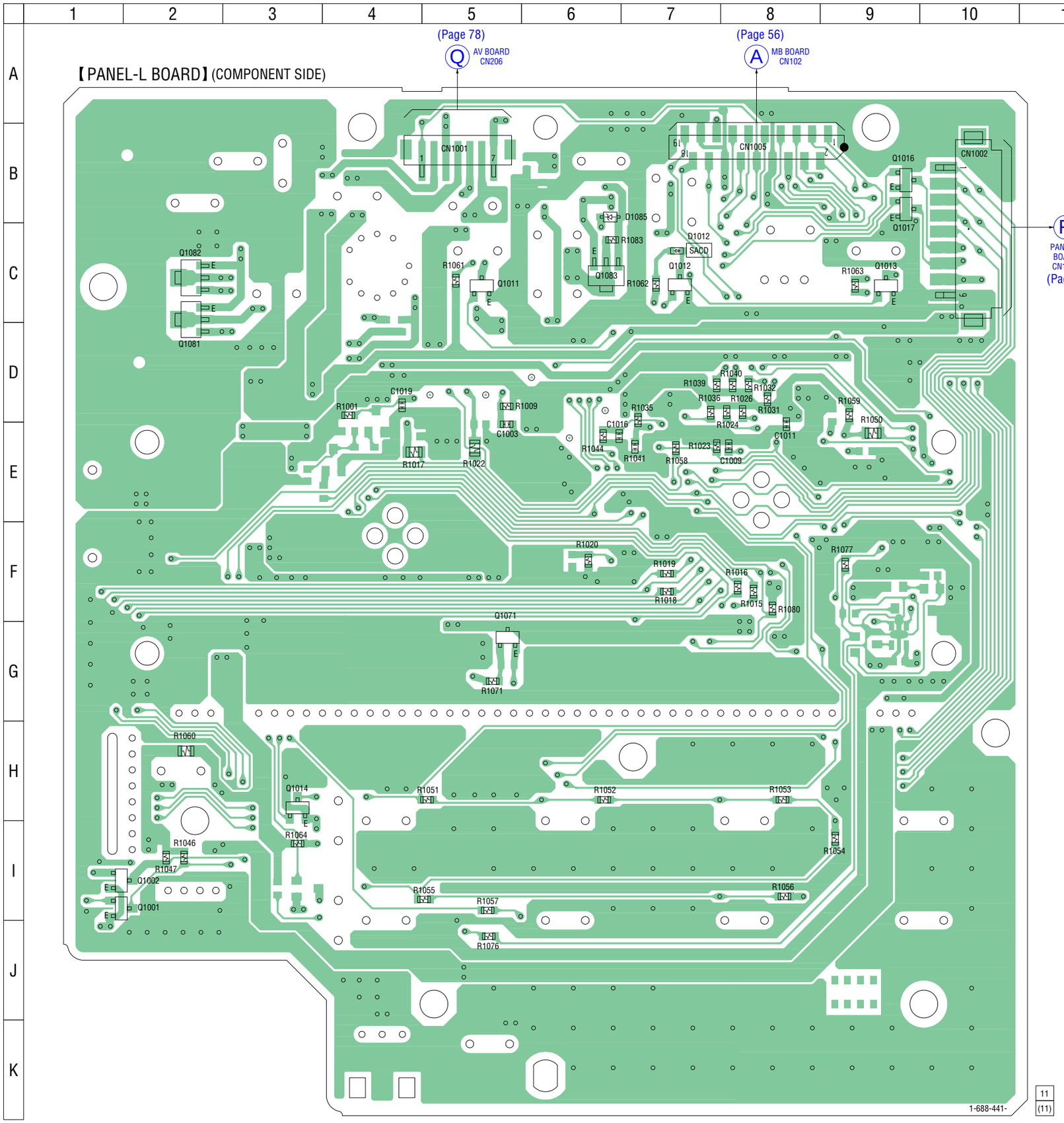
7-35. PRINTED WIRING BOARD – PANEL-L Board (Component Side) –

• See page 55 for Circuit Boards Location.

:Uses unleaded solder.

- **Semiconductor Location**

Ref. No.	Location
D1012	C-7
D1085	B-6
Q1011	C-5
Q1012	C-7
Q1013	C-9
Q1014	H-3
Q1016	B-9
Q1017	B-9
Q1071	G-5
Q1081	C-2
Q1082	C-2
Q1083	C-6

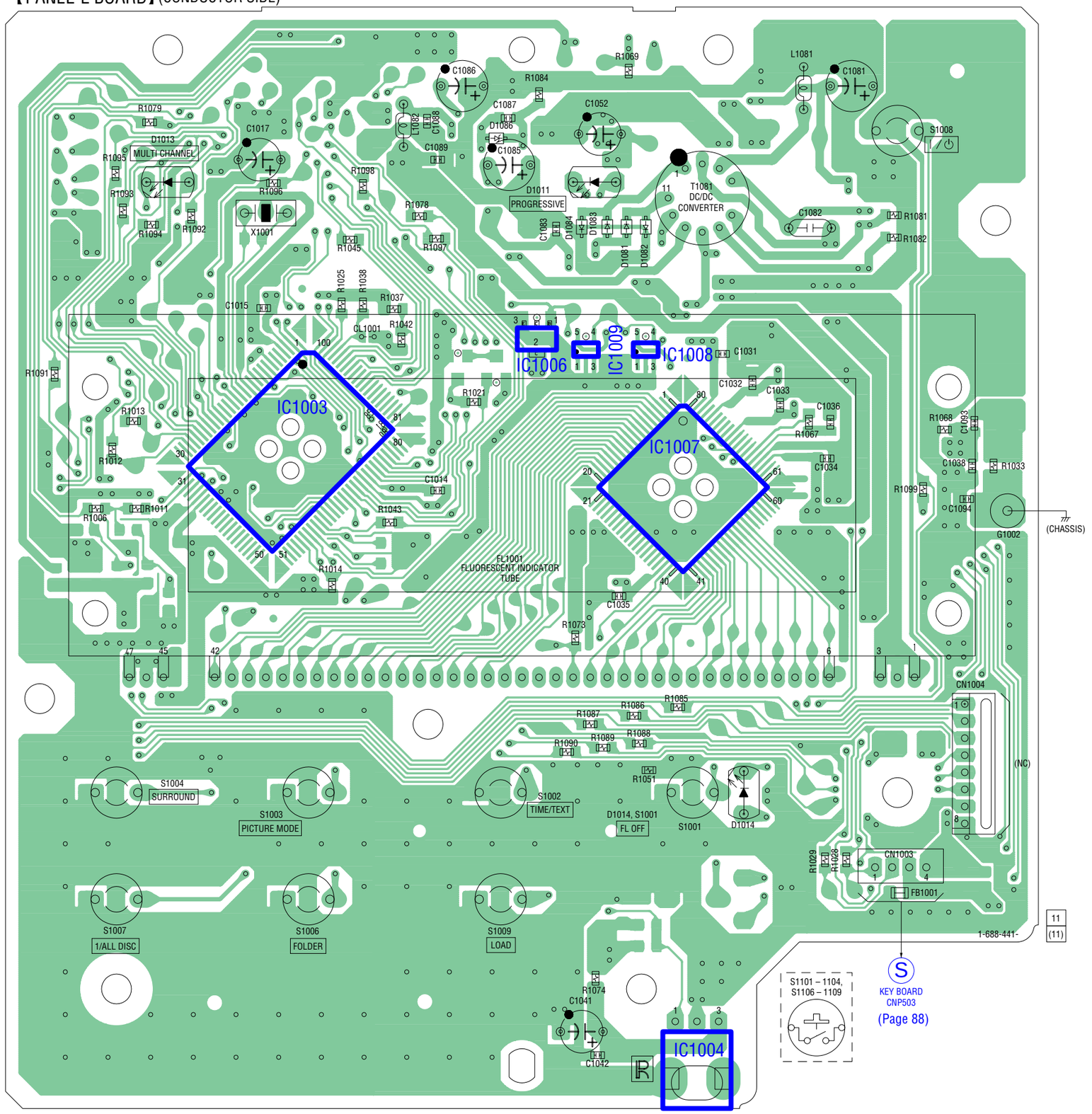


7-36. PRINTED WIRING BOARD – PANEL-L Board (Conductor Side) –

• See page 65 for Circuit Boards Location.

:Uses unleaded solder.

【PANEL-L BOARD】(CONDUCTOR SIDE)



- **Semiconductor Location**

Ref. No.	Location
D1011	C-6
D1013	C-2
D1014	H-8
D1015	I-8
D1081	C-7
D1082	C-7
D1083	C-7
D1084	C-6
D1086	B-6
IC1003	E-4
IC1004	K-7
IC1006	D-6
IC1007	F-7
IC1008	D-7
IC1009	D-6

7-37. SCHEMATIC DIAGRAM – PANEL-L Board (1/2) – • See page 92 for Waveform.

【PANEL-L BOARD】(1/2)

CN1004 8P
1 IN
2 OUT
3 CLK
4 2PIN
5 RESET
6 VPP
7 VDD
8 GND
(NC)

CN1005 19P
1 PON_CHECK(3.3V_MNT)
2 XFRRST
3 XIFBUSY
4 XIFCS
5 SI0
6 SO0
7 SCO
8 GND
9 IFRST
10 P-CONT
11 A-MUTE
12 V-MUTE
13 V-OFF
14 GND
15 SLINK
16 SIRCS_MODE
17 GND
18 TX
19 RX

R1085 22 PON_CHECK
R1086 22
R1087 22
R1088 22
R1089 22
R1090 22
R1079 22 SYSCONRST
R1091 22 SYSCONBUSY
R1092 22 SYSCONCS
R1093 22 SI0
R1094 22 SO0
R1095 22 SC0
GND
R1096 22 IFRST
P-CONT
R1097 22 A-MUTE
R1098 22 V-MUTE
R1078 22 V-OFF
GND
SIRCS_MODE
GND
TX
RX

A MB BOARD (2/14) CN102 (Page 59)

IC1006 RESET SIGNAL GENERATOR
IC1006 S-80827CNUA-B8MT
VOUT VCC GND
R1009 100k
C1003 0.001
C1019 100p
R1001 47k
IFRST

IC1008 PST9127NL
IC1008 KEY INPUT DETECT
IC1009 PST9127NL
IC1009 KEY INPUT DETECT
R1024 10k
R1026 10k
R1023 10k
R1017 0
R1022 0
KEY0
KEY1

X1001 5MHz
SC0 SI0 SO0 SYSCONCS IFRST
JOG-B JOG-A

Z1 Z2 Z3 Z4
09 PANEL-L BOARD (2/2) (Page 87)
P-CONT

C1009 1
C1011 0.01
C1015 0.01
C1017 47 6.3V
R1031 10k
R1032 10k
R1042 10k
CL1000

IC1004 REMOTE CONTROL RECEIVER
IC1004 NJL74H400A
RM-OUT GND VCC+3.5V
C1042 0.1
C1041 47 6.3V
R1074 100
R1076 47k
R1077 100

TX RX
R1013 0
R1012 0
R1059 10k
49

IC1003 INTERFACE CONTROLLER
IC1003 mPD70F3259YGF -S05-JBT-A

SYSCONBUSY SYSCONRST
R1011 0
C1005 0.01
R1043 0
R1014 10k
R1080 100k
R1020 10k
C1014 0.01

R1040 10k KEY2
R1039 10k KEY3
R1025 10k KEY4
R1038 10k
R1045 33 PON_CHECK
R1036 10k
SIRCS_MODE
R1035 10k
R1041 1
C1016 0.01
R1044 120
LED6
LED5
R1058 10k

7-38. SCHEMATIC DIAGRAM – PANEL-L Board (2/2) – • See page 96 for IC Block Diagram.

【PANEL-L BOARD】(2/2)

FL1001
FLUORESCENT INDICATOR TUBE

Q1083
-30V
REGULATOR

Q1071
2SC2412K
GRID DRIVE

T1081
DC/DC
CONVERTER

Q1081
2SD1622
-S-TD
OSC

Q1082
2SD1622
-S-TD
OSC

D1086
UDZS-TE-17
-6.2B

D1085
UDZS-TE-17
-30B

D1081
MA113-(TX)

D1082
MA113-(TX)

D1083
MA113-(TX)

D1084
MA113-(TX)

IC1007
FLUORESCENT INDICATOR
TUBE DRIVER
IC1007
MSM9201-04GS-K

IC B/D

D1011
SELU5E23C
-PTP15
PROGRESSIVE

D1012
CL-191WA
-D-T
SACD

D1013
SELU5E23C
-PTP15
MULTI CHANNEL

D1014
SEL5821A
-TP15
FL OFF

Q1011
DTC114EKA
-T146
LED DRIVE

Q1012
DTC114EKA
-T146
LED DRIVE

Q1013
DTC114EKA
-T146
LED DRIVE

Q1014
DTC114EKA
-T146
LED DRIVE

Q1016
DTC114EKA-T146
LED DRIVE

Q1017
DTC114EKA-T146
LED DRIVE

Q1001
DTC114EKA
-T146
LED SHIFT

Q1002
DTC114EKA
-T146
LEVEL SHIFT

S1001 FL OFF
S1002 TIME/TEXT
S1003 PICTURE MODE
S1004 SURROUND
S1006 FOLDER
S1007 1/ALL DISC
S1008
S1009 LOAD

CN1001 7P
7 EVER+5V
6 EVER+3.3V
5 GND
4 SW+5V
3 SW-GND
2 SW-11V(FL)
1 P-CONT

CN1002 9P
1 KEY1
2 KEY3
3 KEY4
4 JOG-A
5 JOG-B
6 LED5(DISC-CHANGE)
7 LED6(DIRECT-SEARCH)
8 SW+5V
9 GND

CN1003 4P
4 SW+5V
3 GND
2 KEYBOARD_CLK
1 KEYBORAD_DATA

G1002 (CHASSIS)

09 PANEL-L BOARD (1/2) (Page 86)

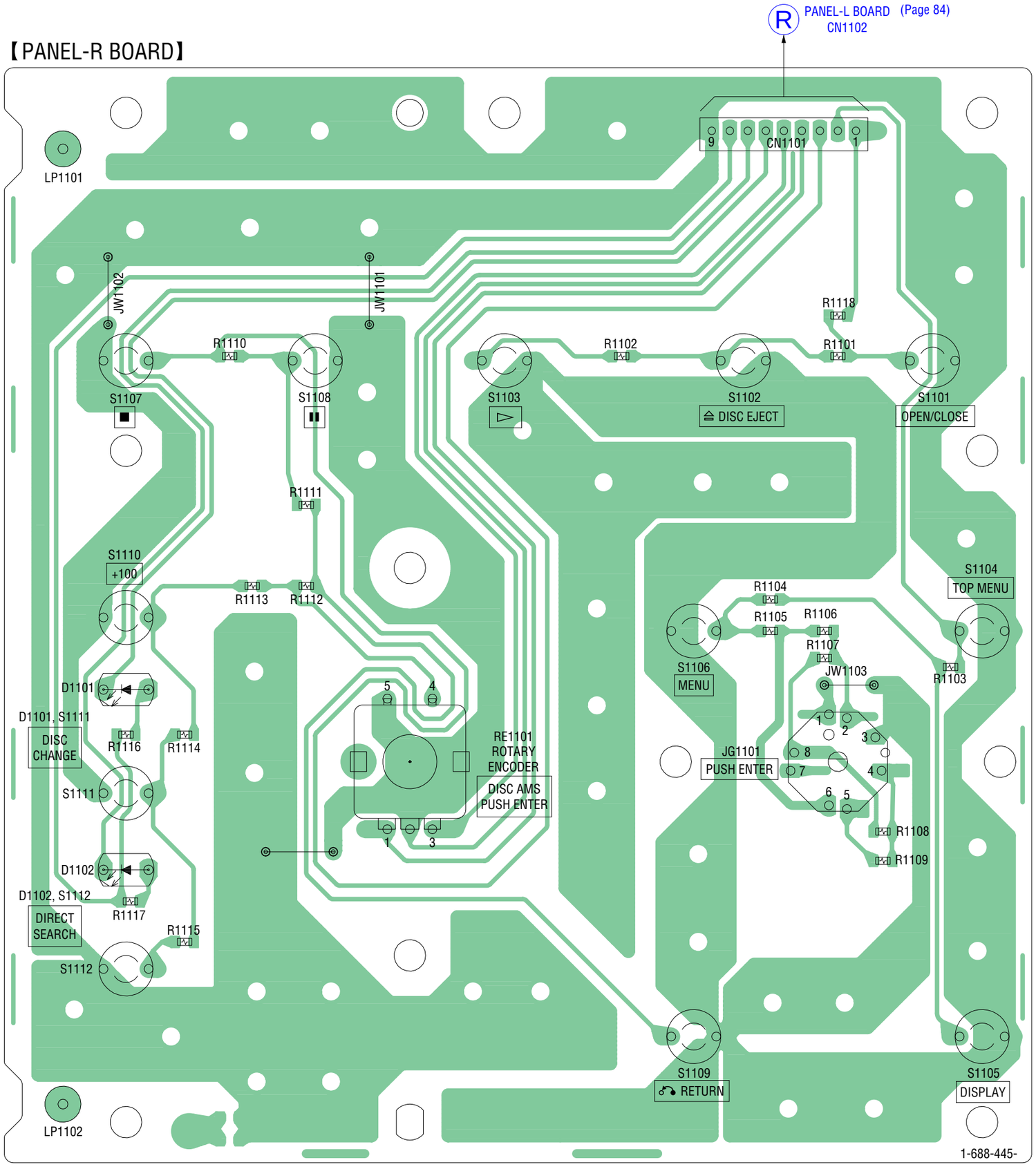
Q AV BOARD (3/3) CN206 (Page 83)

R PANEL-R BOARD CN1101 (Page 89)

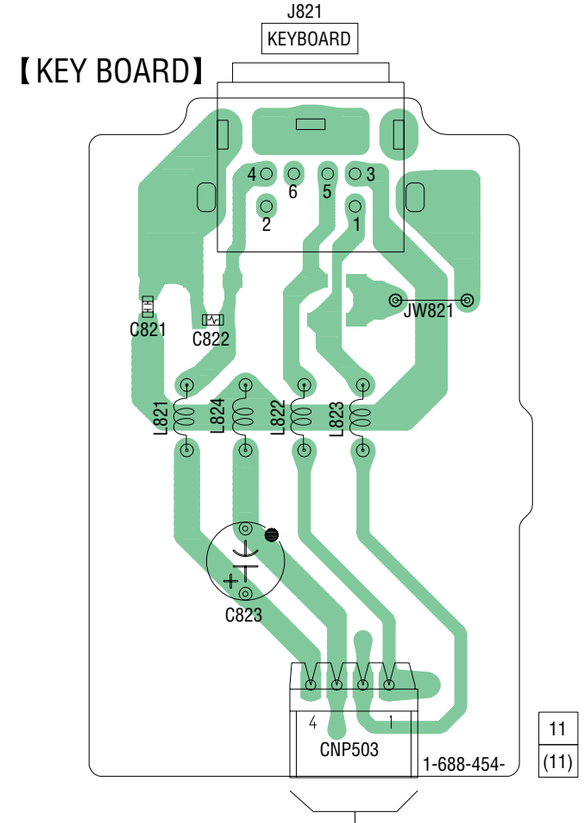
S KEY BOARD CN503 (Page 89)

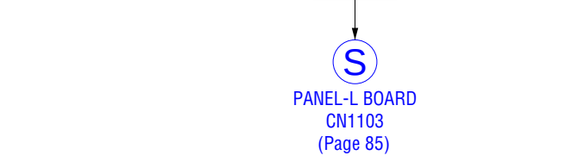
7-39. PRINTED WIRING BOARDS – PANEL Section – • See page 55 for Circuit Boards Location. **:Uses unleaded solder.**

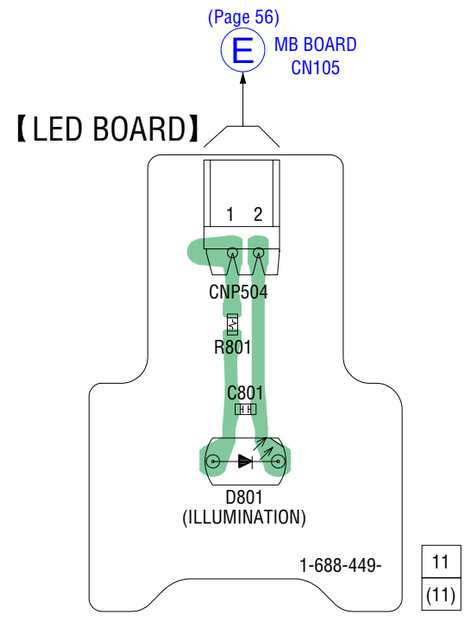
【PANEL-R BOARD】

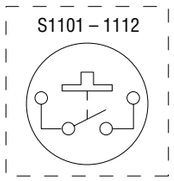


【KEY BOARD】

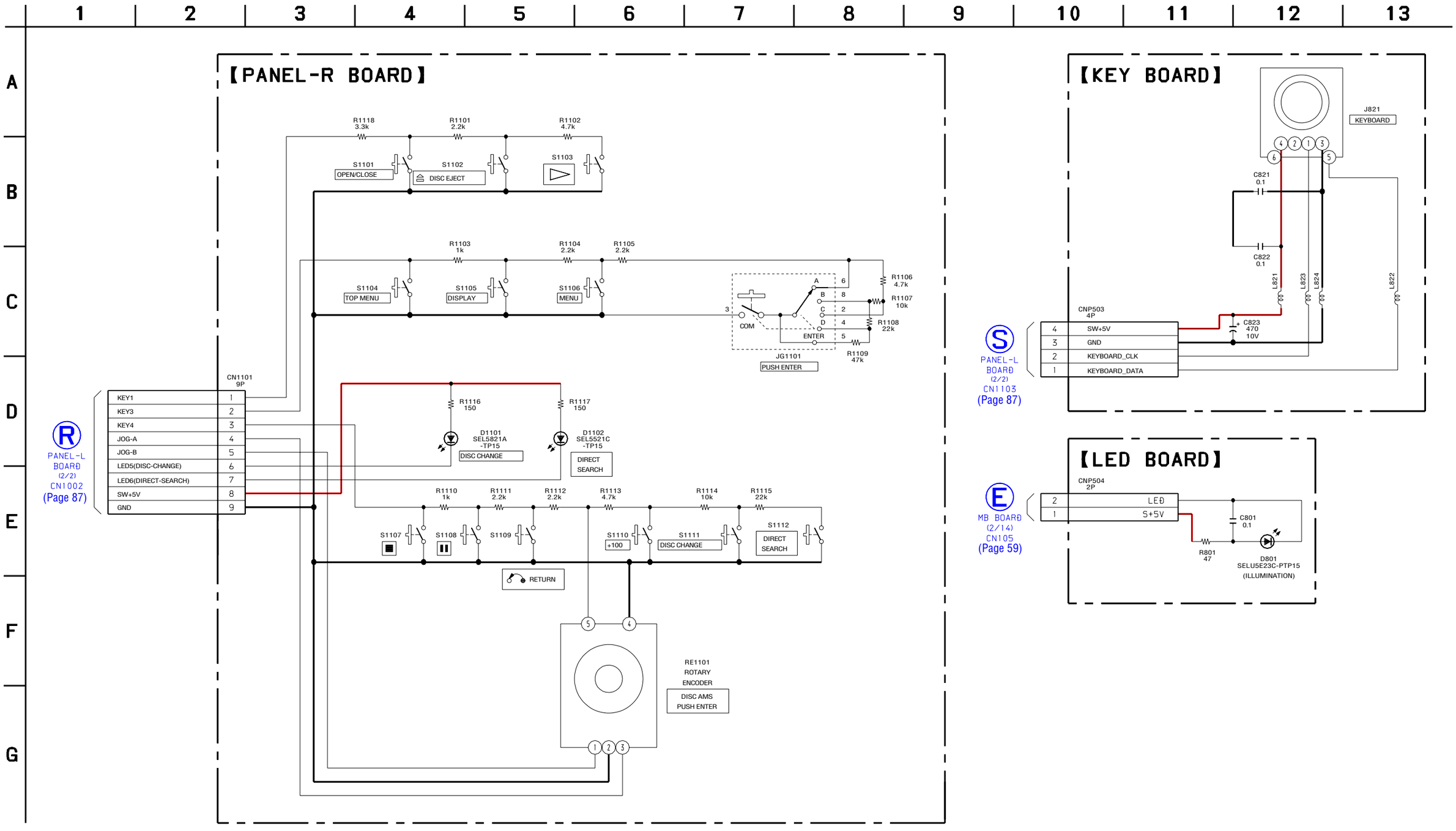








7-40. SCHEMATIC DIAGRAM – PANEL Section –

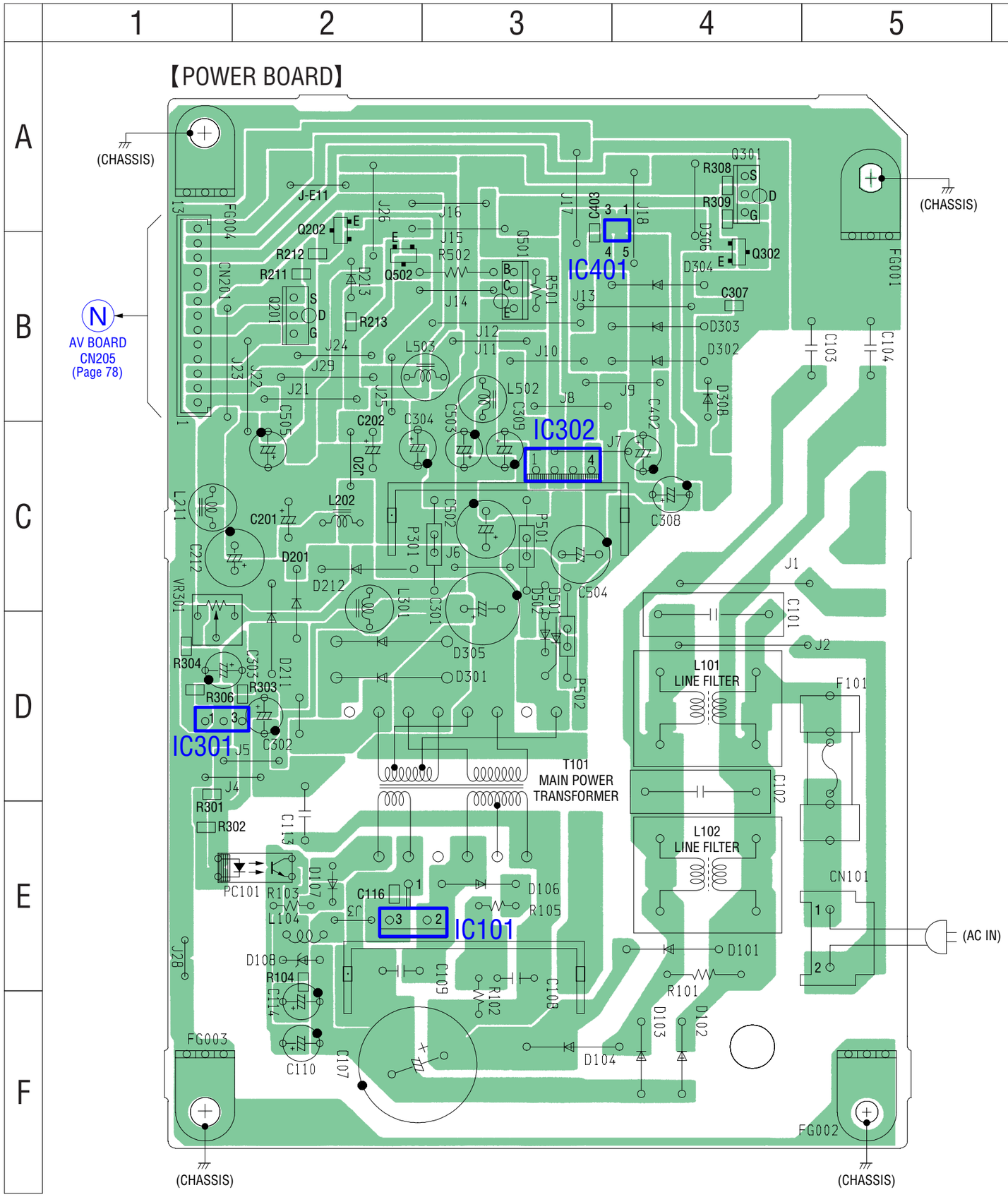


7-41. PRINTED WIRING BOARD – POWER Board –

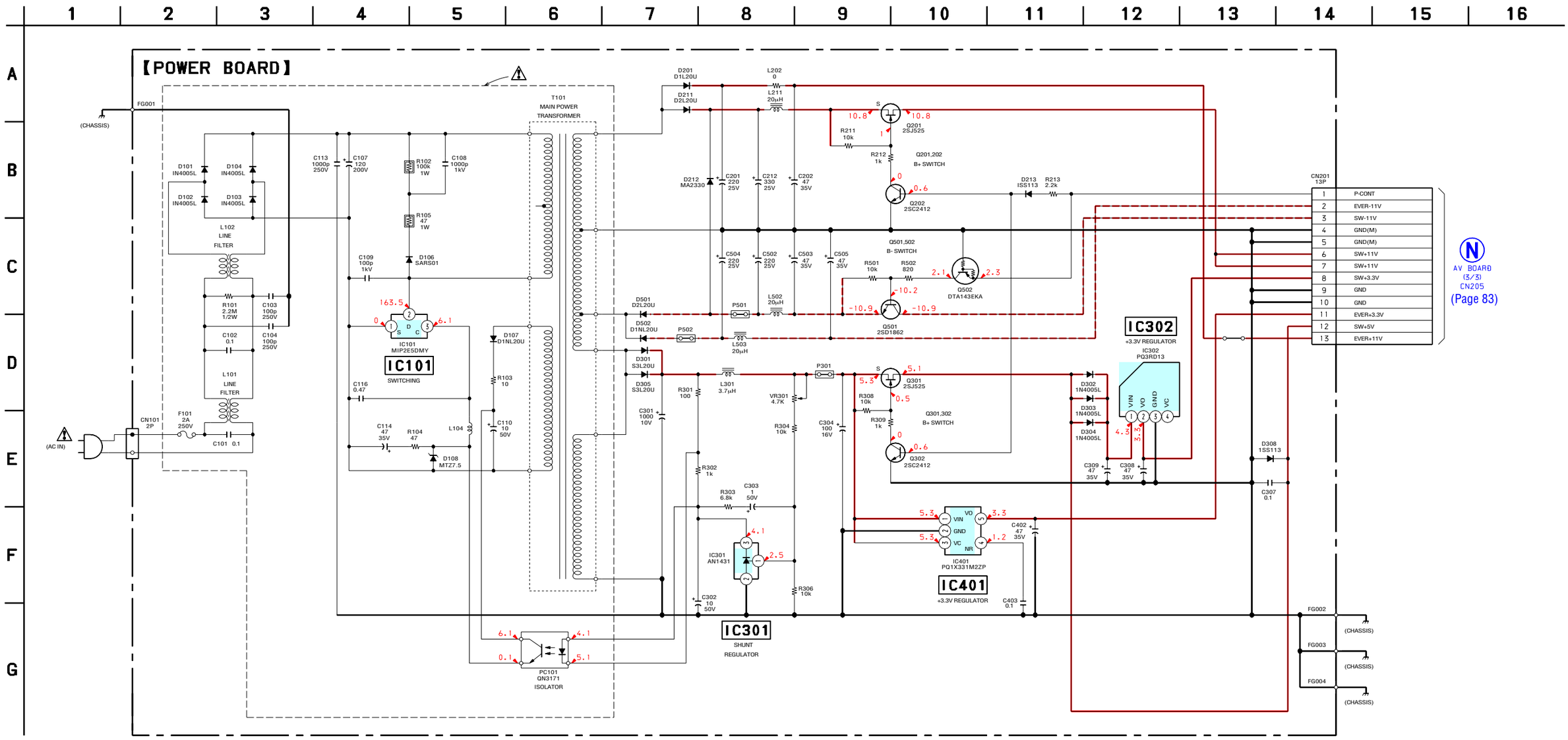
• See page 55 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location
D101	E-4
D102	F-4
D103	F-4
D104	F-3
D106	E-3
D107	E-2
D108	E-2
D201	C-2
D211	D-2
D212	C-2
D213	B-2
D301	D-2
D302	B-4
D303	B-4
D304	B-4
D305	D-2
D308	B-4
D501	D-3
D502	D-3
IC101	E-2
IC301	D-1
IC302	C-3
IC401	A-4
PC101	E-2
Q201	B-2
Q202	B-2
Q301	A-4
Q302	B-4
Q501	B-3
Q502	B-2



7-42. SCHEMATIC DIAGRAM – POWER Board –

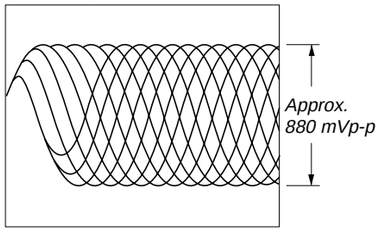


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

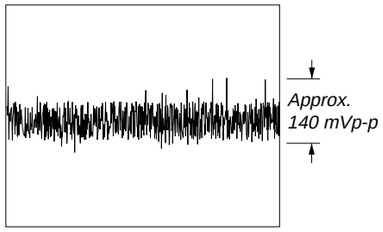
- **Waveforms**

– MB Board –

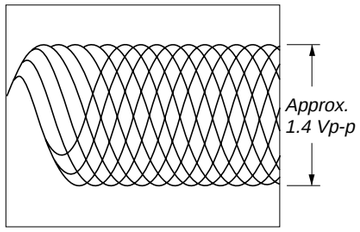
① IC201 ① (RFIP) (DVD Play Mode)



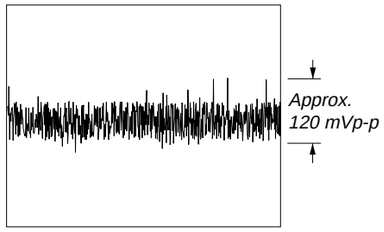
③ IC201 ㊷ (FE) (DVD Play Mode)



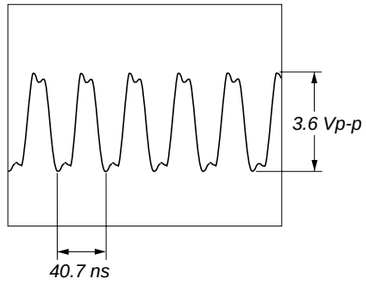
⑤ IC301 ⑪⑪ (RFIN1) (DVD Play Mode)



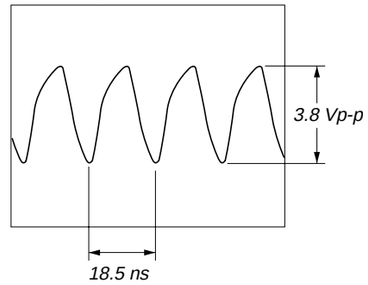
⑧ IC301 ⑫⑧ (ADC1) (DVD Play Mode)



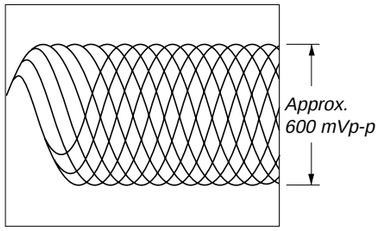
⑫ IC103 ⑨ (512-2OUT), ⑩ (512-1OUT) (DVD Play Mode)



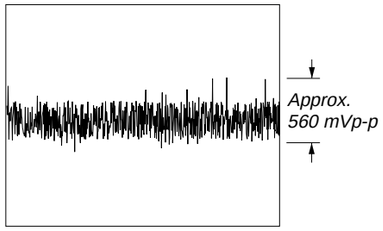
⑯ IC602 ⑱⑩ (MCLK)



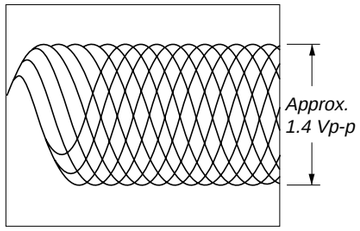
① IC201 ① (RFIP) (CD Play Mode)



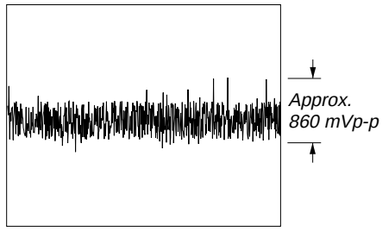
③ IC201 ㊷ (FE) (CD Play Mode)



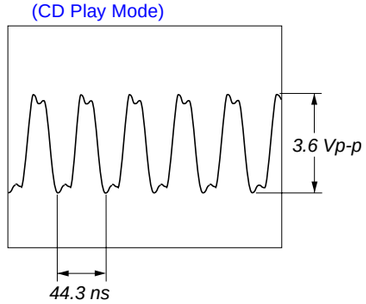
⑥ IC301 ⑪⑨ (RFIN2) (CD Play Mode)



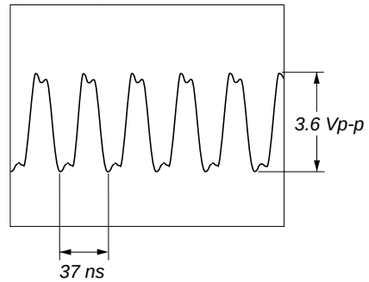
⑧ IC301 ⑫⑧ (ADC1) (CD Play Mode)



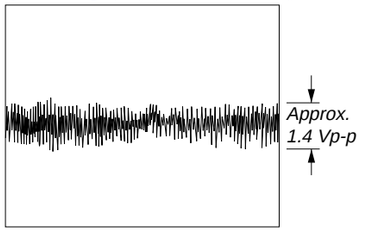
⑫ IC103 ⑨ (512-2OUT), ⑩ (512-1OUT) (CD Play Mode)



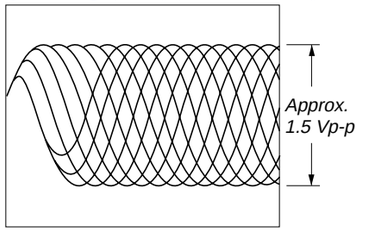
⑰ IC604 ㉜ (CLKIN)



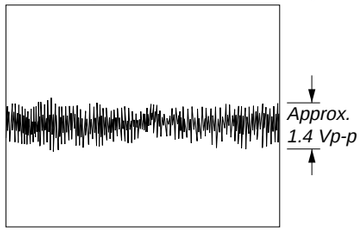
② IC201 ㊶ (TE) (DVD Play Mode)



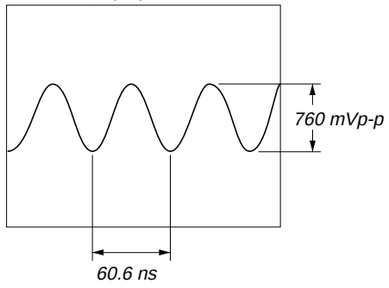
④ IC201 ㊾ (SIGO) (DVD Play Mode)



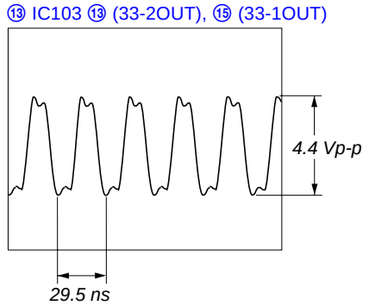
⑦ IC301 ⑫④ (ADC0) (DVD Play Mode)



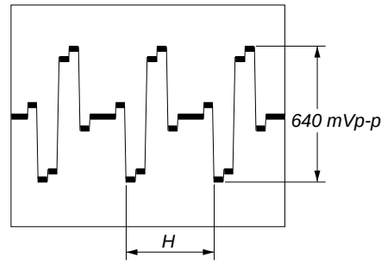
⑨ IC104 ㊺③ (X1)



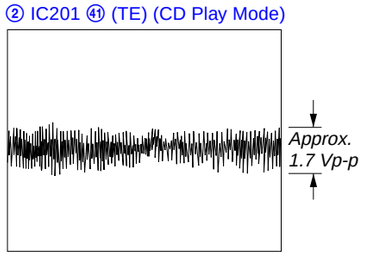
⑬ IC103 ⑬ (33-2OUT), ⑮ (33-1OUT)



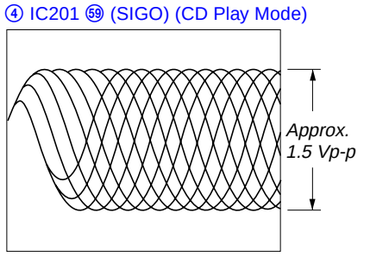
⑱ IC604 ㊲ (CR/B) (Color Bars Play Mode)



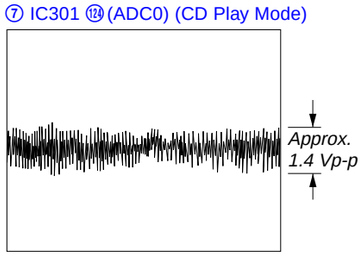
② IC201 ㊶ (TE) (CD Play Mode)



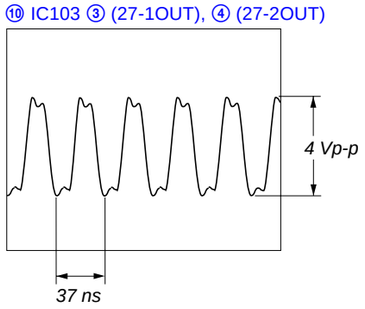
④ IC201 ㊾ (SIGO) (CD Play Mode)



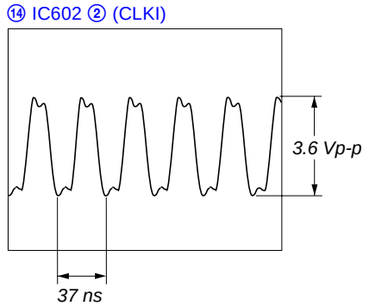
⑦ IC301 ⑫④ (ADC0) (CD Play Mode)



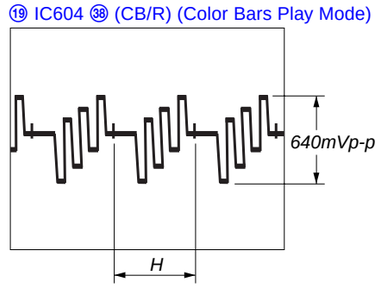
⑩ IC103 ③ (27-1OUT), ④ (27-2OUT)



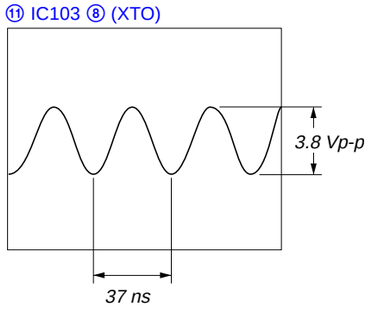
⑭ IC602 ② (CLKI)



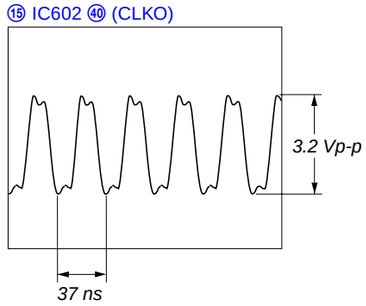
⑲ IC604 ㊳ (CB/R) (Color Bars Play Mode)



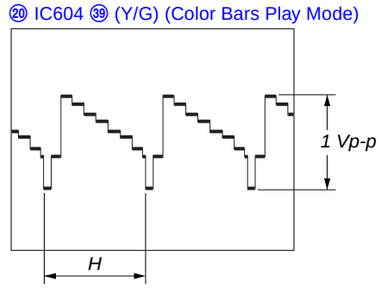
⑪ IC103 ⑧ (XTO)



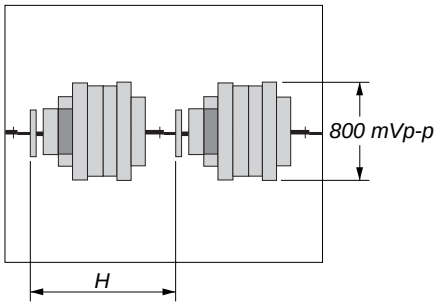
⑮ IC602 ㊵ (CLKO)



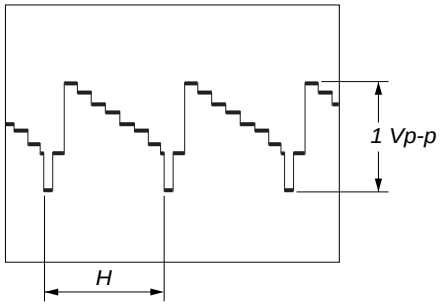
⑳ IC604 ㊴ (Y/G) (Color Bars Play Mode)



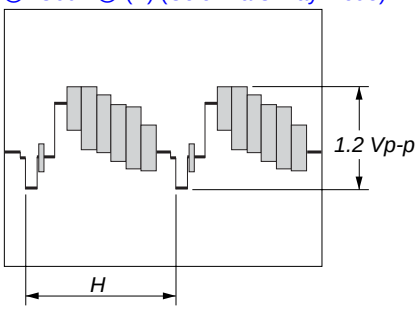
㉑ IC604 ㊷ (C) Color Bars Play Mode)



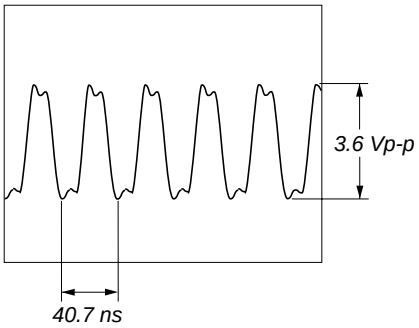
㉒ IC604 ㊸ (Y) (Color Bars Play Mode)



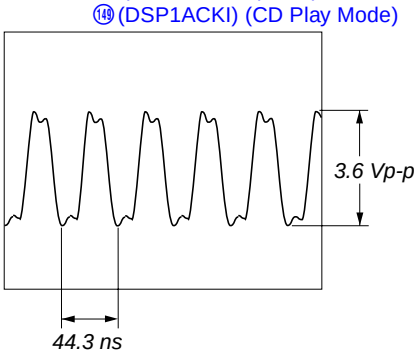
㉓ IC604 ㊹ (V) (Color Bars Play Mode)



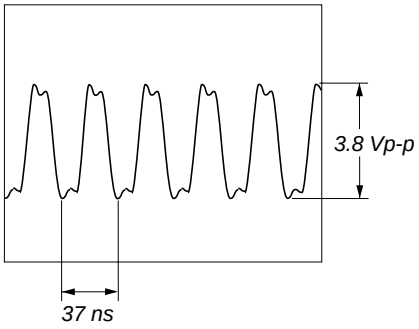
㉔ IC501 ⑧ (DSP1DIACKI), ㉞ (DSP2DIACKI), ㊼ (DSP2ACKI), ㊾ (DSP1ACKI) (DVD Play Mode)



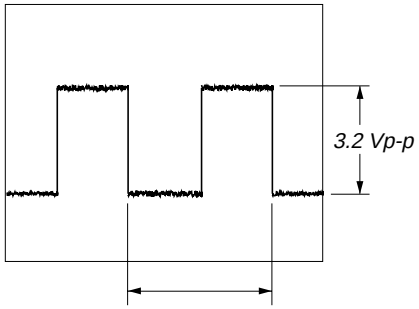
㉔ IC501 ⑧ (DSP1DIACKI), ㉞ (DSP2DIACKI), ㊼ (DSP2ACKI), ㊾ (DSP1ACKI) (CD Play Mode)



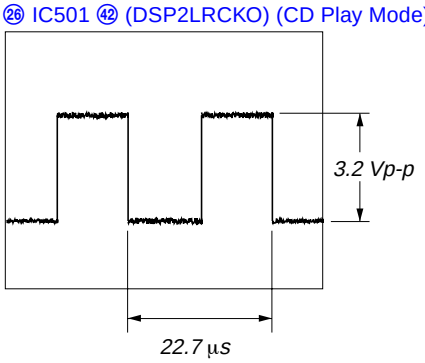
㉕ IC501 ㉒ (SCLKI)



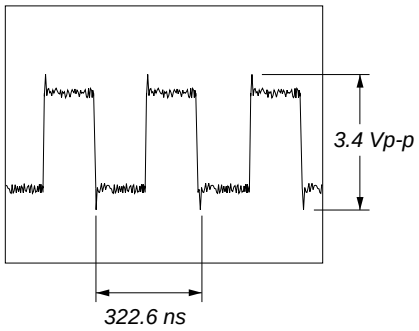
㉖ IC501 ㊷ (DSP2LRCKO) (DVD Play Mode)



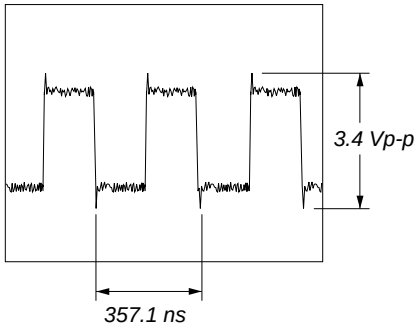
㉖ IC501 ㊷ (DSP2LRCKO) (CD Play Mode)



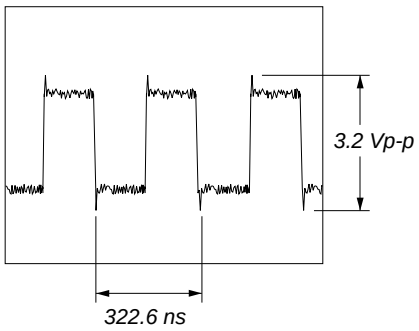
㉗ IC501 ㊸ (DSP2BCKO) (DVD Play Mode)



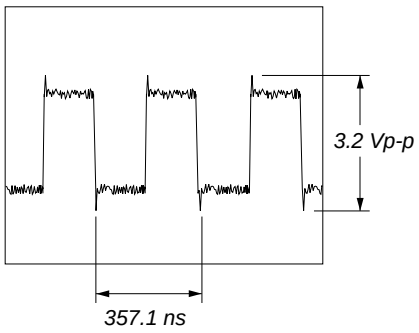
㉗ IC501 ㊸ (DSP2BCKO) (CD Play Mode)



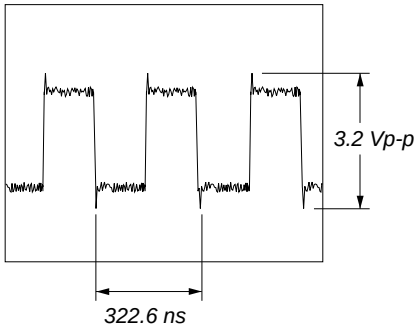
㉘ IC501 ㊾ (DSP2BCKI), ㊼ (DSP1BCKI) (DVD Play Mode)



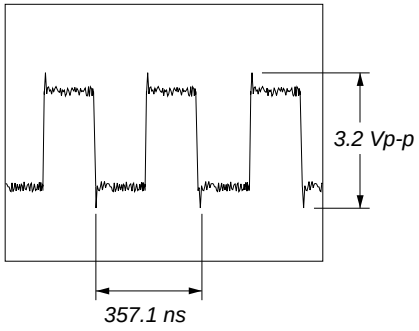
㉘ IC501 ㊾ (DSP2BCKI), ㊼ (DSP1BCKI) (CD Play Mode)



㉙ IC502 ⑨ (BICK) (DVD Play Mode)

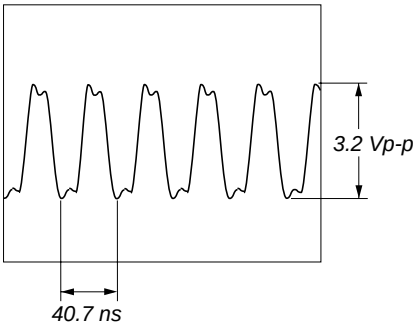


㉙ IC502 ⑨ (BICK) (CD Play Mode)

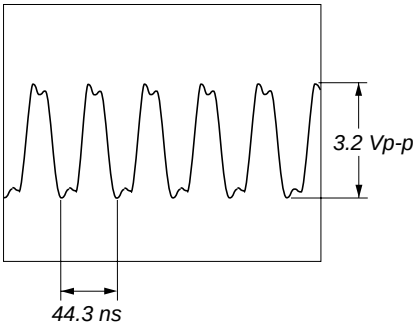


– AV Board –

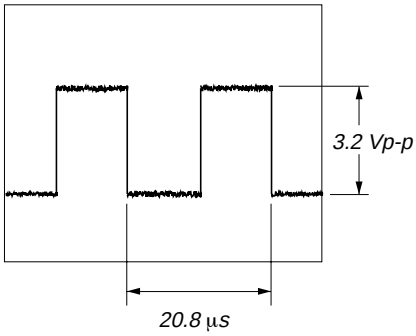
㉚ IC502 ⑩ (MCLK) (DVD Play Mode)



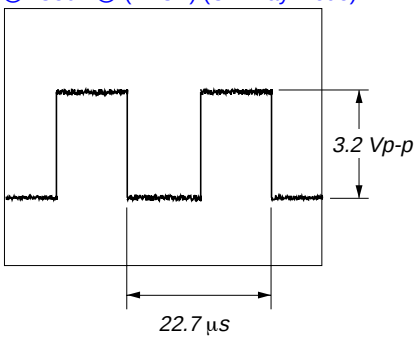
㉚ IC502 ⑩ (MCLK) (CD Play Mode)



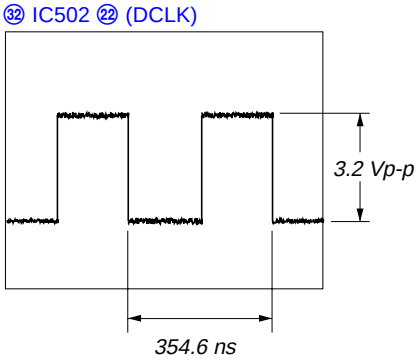
㉛ IC502 ⑰ (LRCK) (DVD Play Mode)



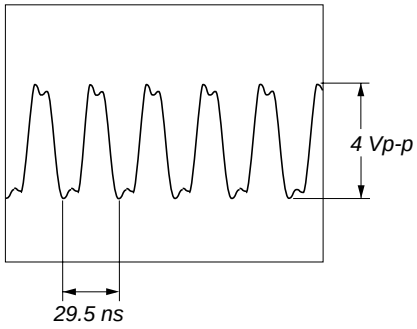
㉛ IC502 ⑰ (LRCK) (CD Play Mode)



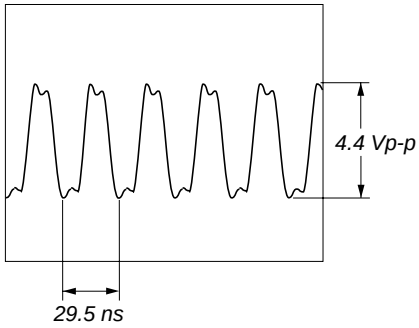
㉜ IC502 ㉒ (DCLK)



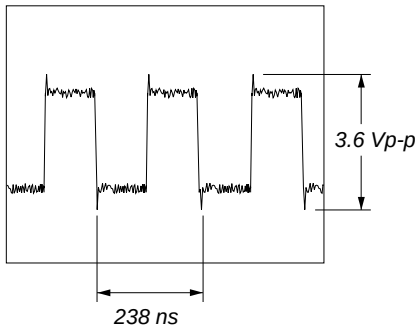
㉝ IC905 ⑪ (MCKI)



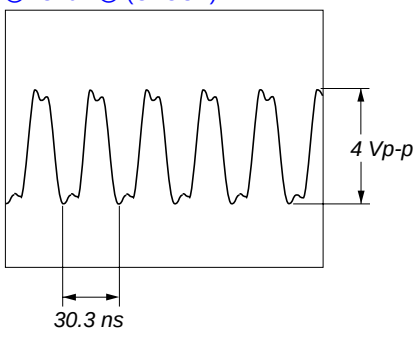
㉞ IC905 ⑭ (DCLK)



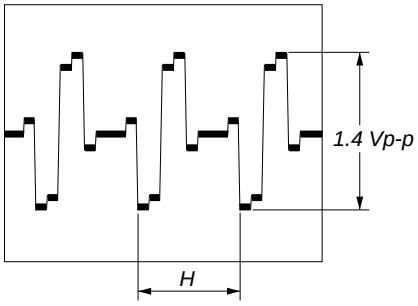
㉟ IC905 ⑯ (SDCK)



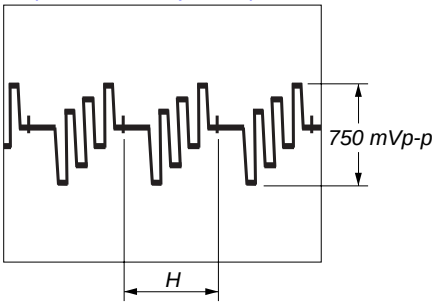
㊱ IC701 ㉔ (CPUCK)



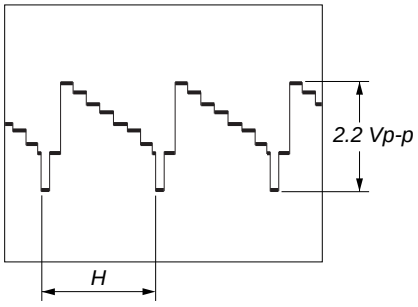
㊸ IC102 ⑳ (CR_OUT)
(Color Bars Play Mode)



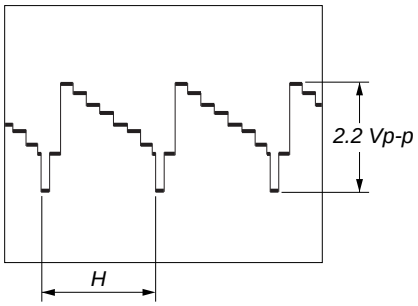
㊹ IC102 ㉒ (CB_OUT)
(Color Bars Play Mode)



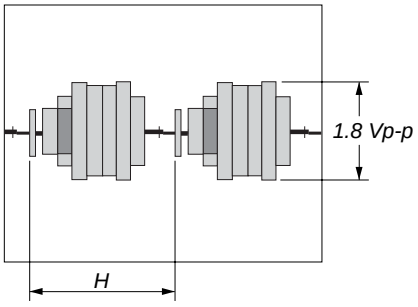
㊺ IC102 ㉔ (Y_OUT)
(Color Bars Play Mode)



㊻ IC102 ㉙ (Y_OUT)
(Color Bars Play Mode)

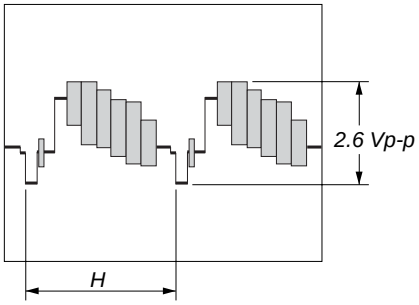


㊼ IC102 ㉛ (C_OUT)
(Color Bars Play Mode)

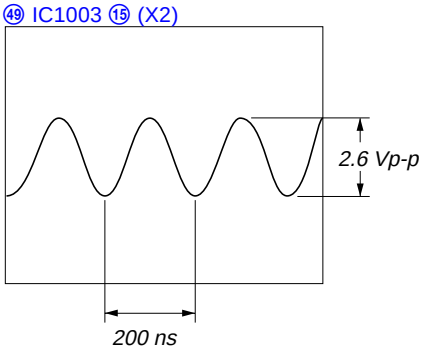


– PANEL-L Board –

㊽ IC102 ㉝ (VIDEO)
(Color Bars Play Mode)

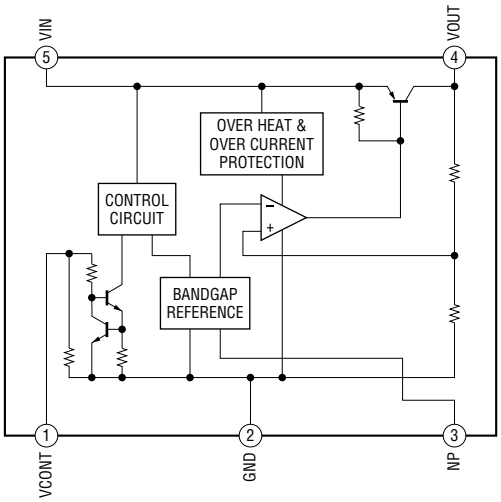


㊾ IC1003 ⑮ (X2)

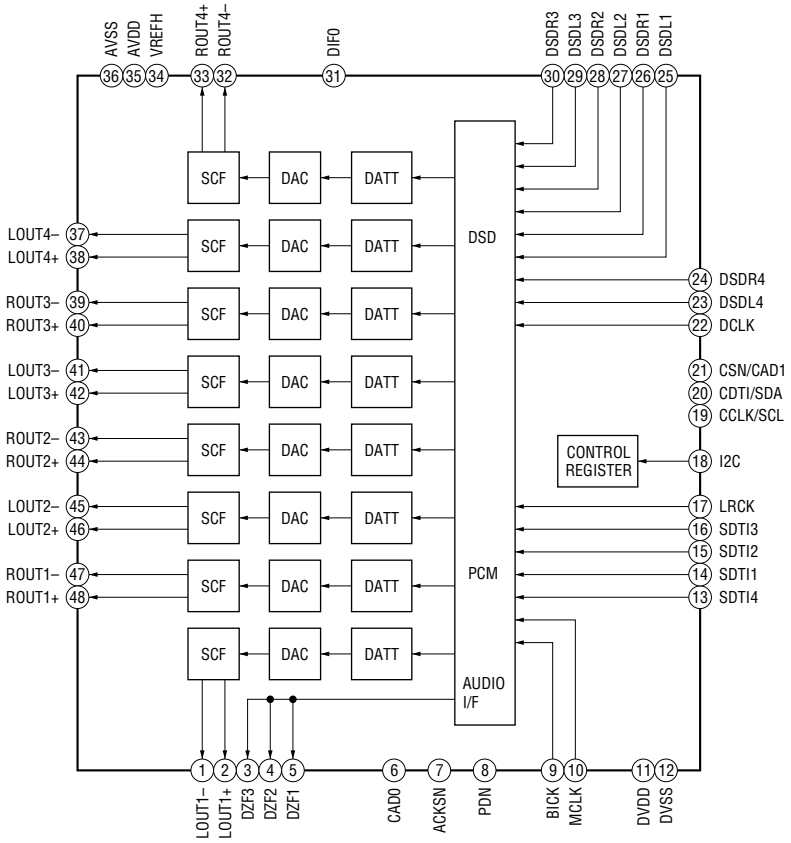


• **IC Block Diagrams**
– MB Board –

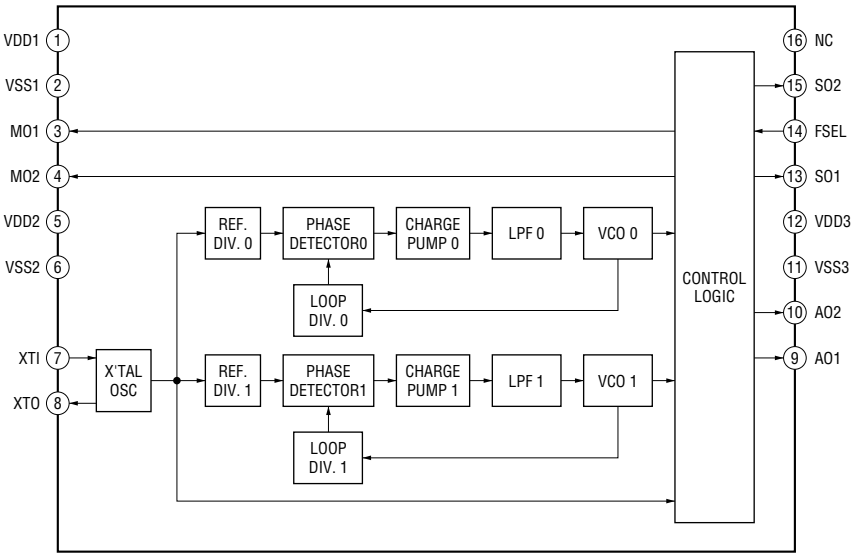
IC102, 302 TK11133CSCL-G
IC401 TK11118CSCL-G
IC601, 605 TK11125CSCL-G



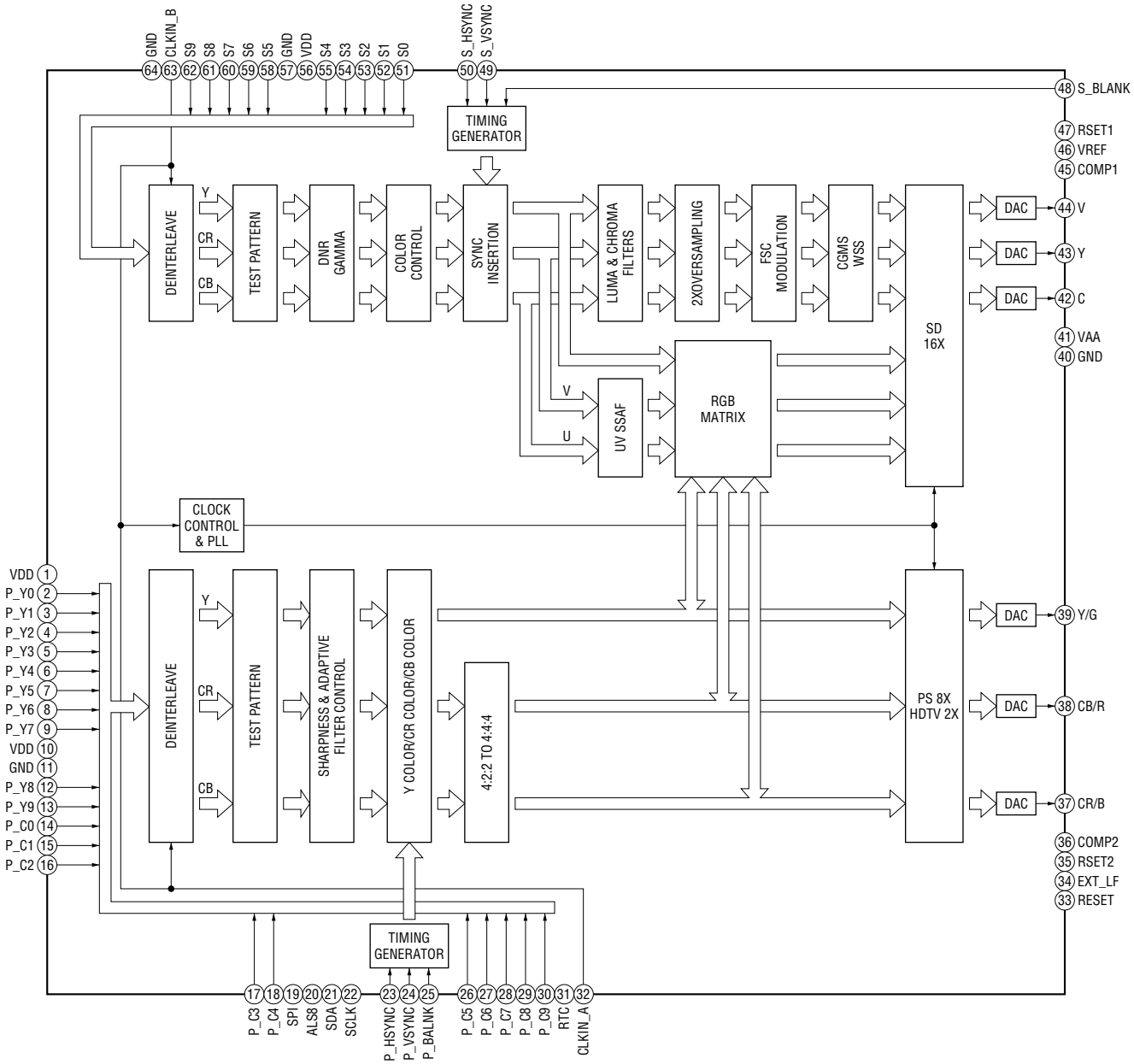
IC502 AK4358VQ-L



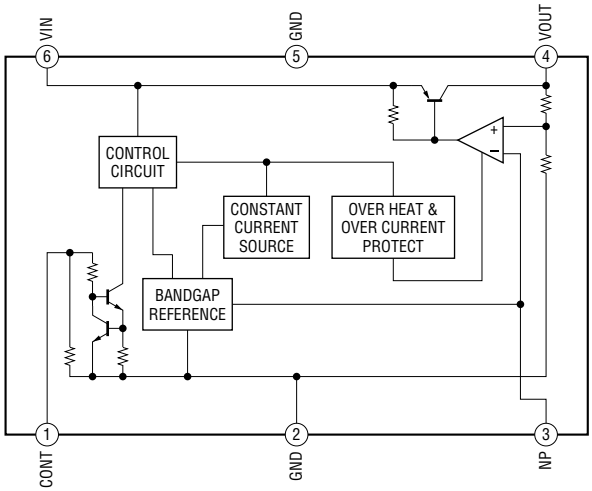
IC103 SM8707EV-G-E2



IC604 ADV7300AKST

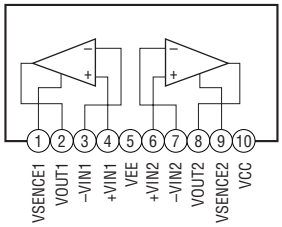


IC901 TK11225CMCL-G



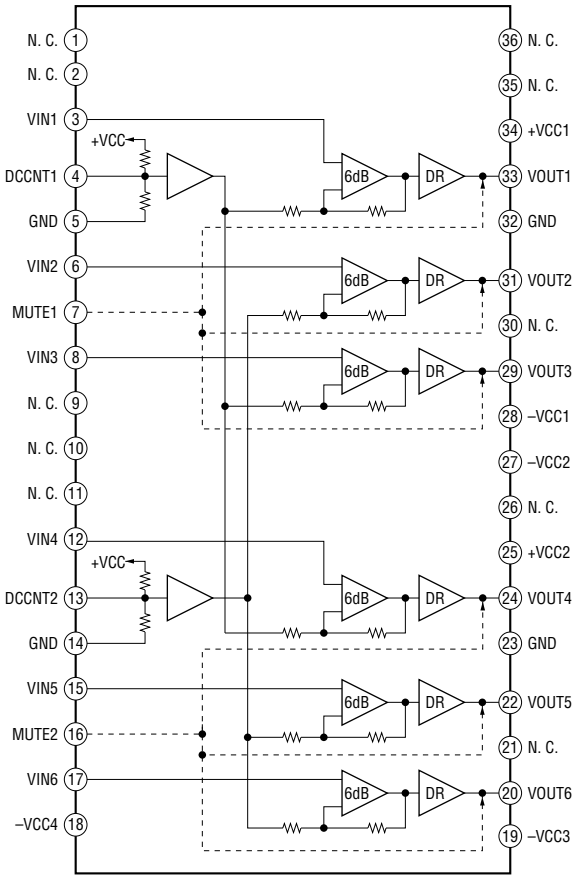
– DRIVER Board –

IC941, 961 LA6510



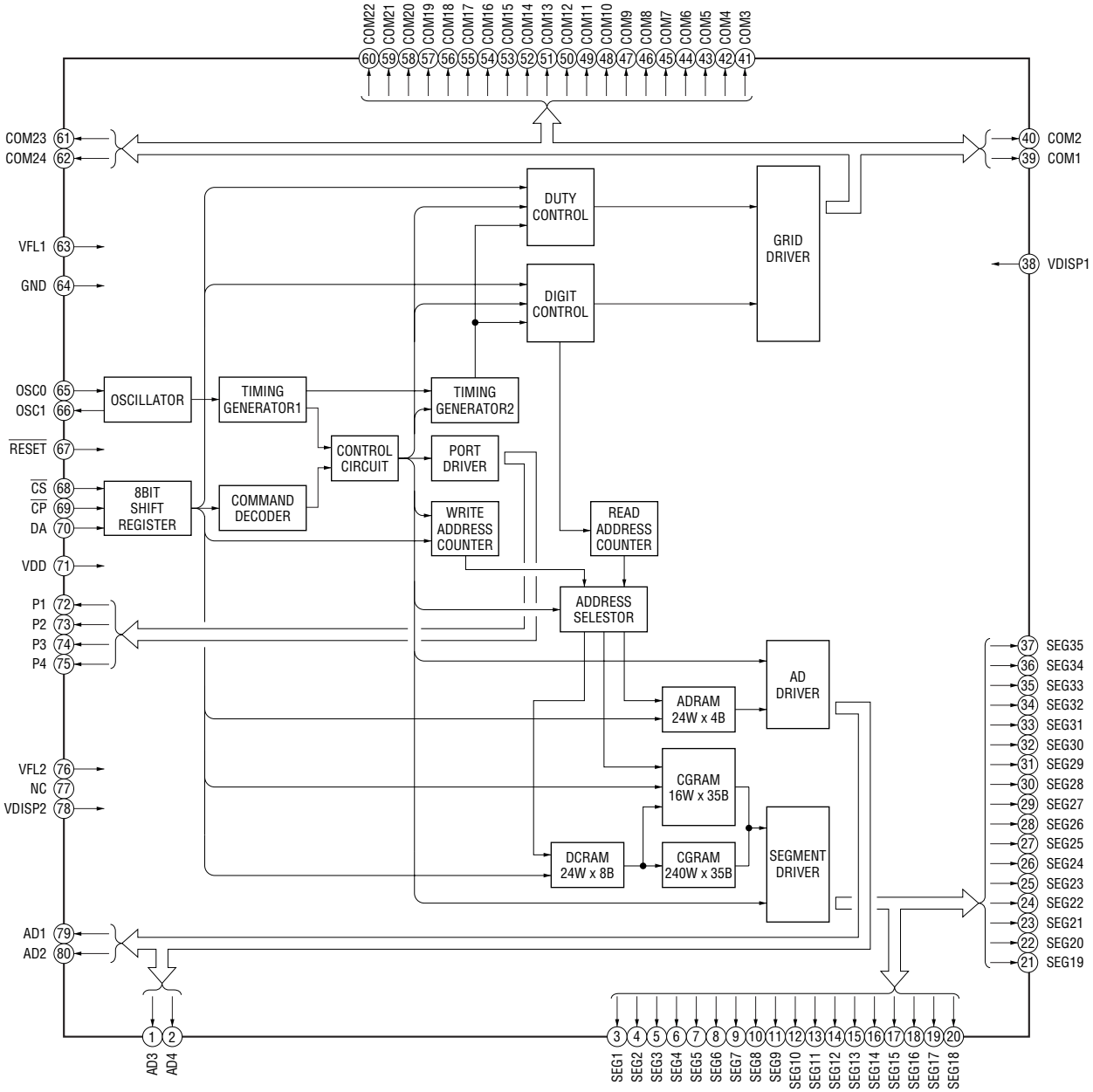
– AV Board –

IC102 LA73053-TLM-E



– PANEL-L Board –

IC1007 MSM9201-04GS-K



7-43. IC PIN FUNCTION DESCRIPTION

• MB BOARD IC104 MB91307RPFV-G-BND-E1 (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1 to 5	HA17 to HA21	O	Address signal output terminal
6	(NOT_USED)	O	Not used
7	WP	O	Write protect signal output to the EEPROM
8	XSACS	O	Chip select signal output to the DSD decoder
9	AVCC	—	Power supply terminal (+3.3V)
10	AVRH	—	Reference voltage input (+3.3V) terminal
11	AVSS	—	Ground terminal
12	DISC_AD	I	Disc detect sensor input terminal
13, 14	MOD_SET1, MOD_SET2	I	Mode setting input terminal
15	IPSW	I	Scan select switch input terminal
16	XAVDECINT	I	Interrupt signal input from the AV decoder
17	XARPINT	I	Interrupt signal input from the DSP
18	XSDSPINT	I	Interrupt signal input from the DSP
19	XGAINT	I	Interrupt signal input from the mechanism controller
20	XIFINT	I	Interrupt signal input from the interface controller
21	XADSPINT0	I	Interrupt signal input from the audio DSP
22	XADSPINT1	I	Interrupt signal input terminal Not used
23	XSARDY	I	Ready signal input from the DSD decoder
24	VCC	—	Power supply terminal (+3.3V)
25	IFSI	I	Serial data input from the interface controller
26	IFSO	O	Serial data output to the interface controller
27	IFSC	O	Serial clock signal output to the interface controller
28	SIN1	I	Serial data input from the audio DSP and DSD decoder
29	SOUT1	O	Serial data output to the audio DSP, D/A converter and DSD decoder
30	SCK1	O	Serial clock signal output to the audio DSP, D/A converter and DSD decoder
31	RX	I	Serial data input terminal (for check)
32	TX	O	Serial data output terminal (for check)
33	XDVD/SACD	O	DVD/SACD selection signal output terminal Not used
34	VSS	—	Ground terminal
35	XRSTO	O	Reset signal output to the DSP, AV decoder, audio DSP, D/A converter and mechanism controller “L”: reset
36	WIDE	O	Wide control signal output terminal
37	(RGBSEL)	O	Not used
38	SDA	I/O	Two-way data bus with EEPROM, I/P converter and D/A converter
39	SCL	O	Serial clock signal output to the EEPROM, I/P converter and D/A converter
40	XSARST	O	Reset signal output to the DSD decoder “L”: reset
41	(EUROY/V)	O	Not used
42	(ISEL)	O	Not used
43	MODE_SELECT0	I	Mode selection signal input terminal (Fixed at “H” in this set)
44, 45	MODE_SELECT1, MODE_SELECT2	I	Mode selection signal input terminal (Fixed at “L” in this set)
46	AVDREQ0	I	Request signal input from the AV decoder
47	AVDDACK0	O	Acknowledge signal output to the AV decoder
48	XDRVMUTE	O	Drive muting signal output to the motor/coil driver

Pin No.	Pin Name	I/O	Description
49	AVDREQ1	I	Request signal input from the AV decoder
50	AVDDACK1	O	Acknowledge signal output to the AV decoder
51	XIFCS	O	Chip select signal output to the interface controller
52	VSS	—	Ground terminal
53	X1	O	System clock output terminal (16.5 MHz)
54	X0	I	System clock input terminal (16.5 MHz)
55	VCC	—	Power supply terminal (+3.3V)
56	(CKSW1)	O	Not used
57	(OCSW1)	O	Not used
58	XROMCS	O	Chip select signal output to the flash memory
59	XRAMCS	O	Chip select signal output to the S-RAM
60, 61	XAVCS0, XAVCS1	O	Chip select signal output to the AV decoder
62	XARPCS	O	Chip select signal output to the DSP
63	XSDSPCS	O	Chip select signal output to the DSP
64	VCCI	—	Power supply terminal (+1.8V)
65	XGACS	O	Chip select signal output to the mechanism controller
66	(NC)	O	Not used
67	XWAIT	I	Wait signal input from the DSP and AV decoder
68	TEST (H)	I	Input terminal for the test (normally: fixed at “H”)
69	TEST	I	Input terminal for the test
70	XRD	O	Read enable signal output to the flash memory, S-RAM, DSP, AV decoder and mechanism controller
71	XWRH	O	High byte write enable signal output to the flash memory, S-RAM, DSP, AV decoder and mechanism controller
72	XWRL	O	Low byte write enable signal output to the S-RAM
73	XNMI	I	Not used
74	VCCI	—	Power supply terminal (+1.8V)
75	VSS	—	Ground terminal
76	XRESET	I	Reset signal input from the interface controller “L”: reset
77	CPUCK	O	Master clock (33 MHz) signal output to the mechanism controller
78	SMUTE	O	Soft muting control signal output to the DSD decoder
79	XDACS	O	Chip select signal output to the D/A converter
80	XADSPCS	O	Chip select signal output to the audio DSP
81	48/44.1K	O	PLL frequency control signal output to the clock generator
82	XLDON	O	Laser diode control signal output to the RF amplifier
83	MAMUTE	O	Audio muting control signal output terminal
84	XSRWE	O	Write enable signal to the S-RAM
85 to 100	HD0 to HD15	I/O	Two-way data bus terminal
101	VSS	—	Ground terminal
102 to 109	HA0 to HA7	O	Address signal output terminal
110	VCC	—	Power supply terminal (+3.3V)
111 to 118	HA8 to HA15	O	Address signal output terminal
119	VSS	—	Ground terminal
120	HA16	O	Address signal output terminal

• MB BOARD IC201 SP3726A (CD/DVD/SACD RF AMP, FOCUS/TRACKING ERROR AMP)

Pin No.	Pin Name	I/O	Description
1, 2	RFIP, RFIN	I	RF signal input from the optical pick-up block
3	CP	—	Tracking low-pass filter terminal
4	WIN	I	Wobble detection signal input terminal Not used
5	WPP	O	Wobble push-pull signal output terminal Not used
6	CN	—	Tracking low-pass filter terminal
7 to 10	A2 to D2	I	Photo detector interface input from the optical pick-up block (AC coupled input for the DPD and wobble)
11 to 14	D to A	I	Photo detector interface input from the optical pick-up block (main)
15, 16	E, F	I	Photo detector interface input from the optical pick-up block (sub)
17	SIGDET B	O	Signal detection signal output to the DSP
18	INTR	I	Interruption control signal input from the DSP
19	VC	O	Reference voltage (+2.5V) output to the optical pick-up block
20	VPB	—	Power supply terminal (+5V) (for servo block)
21	PGSELO	O	PDIC gain selection signal output to the optical pick-up block
22	PD	I	Automatic power control signal input from the optical pick-up block
23	VNB	—	Ground terminal (for servo block)
24	LDSELO	O	Automatic power control laser diode selection signal output to the optical pick-up block
25	DVDLD	O	DVD automatic power control signal output terminal
26	CDLD	O	CD automatic power control signal output terminal
27	LDONB	I	Laser diode output control signal input from the system controller
28	MEVO	O	Envelope signal output terminal for mirror
29	MIN	I	RF signal input terminal for mirror
30	MP	—	Mirror top hold terminal
31	MB	—	Mirror bottom hold terminal
32	MLPF	—	Mirror low-pass filter terminal
33	MIRR	O	Mirror signal output to the DSP
34	BYP2	—	Servo AGC gain control terminal
35	PII	I	Pull-in signal input terminal
36	PI	O	Pull-in signal output to the DSP
37	TZC	O	Tracking zero crossing signal output to the DSP
38	DFT	O	Defect signal output to the DSP
39	VCI	I	Reference voltage input from the motor/coil driver
40	TZIN	I	Tracking zero crossing signal input terminal
41	TE	O	Tracking error signal output to the DSP
42	FE	O	Focusing error signal output to the DSP
43	TPH	—	Pull-in top hold terminal
44	MON	O	Monitor signal output to the DSP
45	SRD	O	Serial data output to the DSP
46	SWD	I	Serial data input from the DSP
47	SCLK	I	Serial clock signal input from the DSP
48	SDEN	I	Serial data enable signal input from the DSP
49	V33	—	Power supply terminal (+3.3V) (for CMOS output buffers)
50	RX	I	Reference resistor input terminal
51	TPA	—	RF top hold terminal
52	MEV	—	RF bottom envelope terminal

Pin No.	Pin Name	I/O	Description
53	VNA	—	Ground terminal (for RF block and serial port)
54, 55	FNN, FNP	O	Differential filter normal signal output terminal
56, 57	DIP, DIN	I	Analog signal input terminal for RF single buffer
58	BYP	—	RF AGC gain control terminal
59	SIGO	O	Single-ended RF signal output to the DSP and DSD decoder
60	VPA	—	Power supply terminal (+5V) (for RF block and serial port)
61, 62	AIP, AIN	I	AGC amplifier signal input terminal
63, 64	ATON, ATOP	O	Differential attenuator signal output terminal

• MB BOARD IC301 CXD9703R (DIGITAL SIGNAL PROCESSOR, DIGITAL SERVO PROCESSOR)

Pin No.	Pin Name	I/O	Description
1	VSS	—	Ground terminal (for digital system)
2 to 9	A0 to A7	I	Address signal input terminal
10	VDD1.8V	—	Power supply terminal (+1.8V) (for digital system)
11	XINT	O	Interrupt signal output to the system controller
12	HCS	I	Chip select signal input from the system controller
13	TESTK0	I	Input terminal for the test (normally: fixed at “L”)
14	VSS	—	Ground terminal (for digital system)
15	PDM0	O	Tracking coil drive signal output terminal
16	TESTK1	I	Input terminal for the test (normally: fixed at “L”)
17	PDM1	O	Tracking coil drive signal output terminal
18	TESTK2	I	Input terminal for the test (normally: fixed at “L”)
19	VDD3.3V	—	Power supply terminal (+3.3V) (for digital system)
20	PDM2	O	Focus coil drive signal output terminal
21	TESTK3	I	Input terminal for the test (normally: fixed at “L”)
22	PDM3	O	Focus coil drive signal output terminal
23	VSS	—	Ground terminal (for digital system)
24	XWR	I	Write enable signal input from the system controller
25	XRD	I	Read enable signal input from the system controller
26	XINT	O	Interrupt signal output to the system controller
27	XCS	I	Chip select signal input from the system controller
28	XWAIT	O	Wait signal output to the system controller
29	XMWR	O	Write enable signal output to the D-RAM
30	XCAS	O	Column address strobe signal output to the D-RAM
31	XRAS	O	Row address signal output to the D-RAM
32, 33	MDS0, MDS1	O	Spindle motor drive signal output terminal
34	VDD1.8V	—	Power supply terminal (+1.8V) (for digital system)
35	VSS	—	Ground terminal (for digital system)
36 to 43	MD0 to MD7	I/O	Two-way data bus with the D-RAM
44	VDD3.3V	—	Power supply terminal (+3.3V) (for digital system)
45	VSS	—	Ground terminal (for digital system)
46 to 53	MD8 to MD15	I/O	Two-way data bus with the D-RAM
54	VDD1.8V	—	Power supply terminal (+1.8V) (for digital system)
55	LOCK	O	EFM lock detection signal output terminal Not used
56	DOUT	O	Digital audio data output to the AV decoder and audio DSP
57	SDCK	O	Stream data bus clock signal output to the AV decoder and DSD decoder
58	XSHD	O	Stream data bus header flag signal output to the AV decoder and DSD decoder
59	XSRQ	I	Stream data bus request signal input from the AV decoder and DSD decoder
60	VSS	—	Ground terminal (for digital system)
61	XRESET	I	Reset signal input from the system controller “L”: reset
62	VDD3.3V	—	Power supply terminal (+3.3V) (for digital system)
63	XSAK	O	Stream data bus acknowledge signal output to the AV decoder and DSD decoder
64	SDEF	O	Stream data bus error flag signal output to the AV decoder and DSD decoder
65 to 74	MA0 to MA9	O	Address signal output to the D-RAM
75	VSS	—	Ground terminal (for digital system)
76	VDD1.8V	—	Power supply terminal (+1.8V) (for digital system)

Pin No.	Pin Name	I/O	Description
77 to 84	SD0 to SD7	O	Stream data output to the AV decoder and DSD decoder
85	JITPWM	O	Jitter PWM signal output terminal Not used
86	RFD	I/O	RF binary data input/output terminal Not used
87	PLCKO	O	Operation clock signal output for PSP physical disc mark detection to the DSD decoder
88	VSS	—	Ground terminal (for digital system)
89	VSSA0	—	Ground terminal (for analog system)
90	VCO	I	VCO control signal input terminal
91, 92	R1, R2	I	VCO external resistor connection terminal
93	VDDA0 3.3V	—	Power supply terminal (+3.3V) (for analog system)
94	VSSA1	—	Ground terminal (for digital system)
95	INM	I	OP amplifier negative input terminal
96	INP	I	OP amplifier positive input terminal
97 to 99	FR1 to FR3	I	Feedback resistor selection terminal
100	Y	O	OP amplifier output terminal
101	VDDA1 3.3V	—	Power supply terminal (+3.3V) (for analog system)
102	IREF	I	D/A converter reference current input terminal
103	AOUT	O	D/A converter output terminal
104	VSSA2	—	Ground terminal (for analog system)
105	VDDA2 3.3V	—	Power supply terminal (+3.3V) (for analog system)
106	BIAS	I	D/A converter bias input terminal
107	VREF	I	D/A converter reference voltage input terminal
108	VSSD0	—	Ground terminal (for A/D converter)
109	VDDD0 3.3V	—	Power supply terminal (+3.3V) (for A/D converter)
110	VRT	I	A/D converter reference input terminal
111	RFIN1	I	RF signal input from the RF amplifier (for DVD)
112	VDDA3 3.3V	—	Power supply terminal (+3.3V) (for analog system)
113	RFIN2	I	RF signal input from the RF amplifier (for CD)
114	VSSA3	—	Ground terminal (for analog system)
115	VRB	I	A/D converter reference input terminal
116	VSSD1	—	Ground terminal (for A/D converter)
117	VDDD1 3.3V	—	Power supply terminal (+3.3V) (for A/D converter)
118	VSSD2	—	Ground terminal (for A/D converter)
119	VDDD2 3.3V	—	Power supply terminal (+3.3V) (for A/D converter)
120	VRBA	I	A/D converter reference input terminal
121	VSSA4	—	Ground terminal (for analog system)
122	VDDA4 3.3V	—	Power supply terminal (+3.3V) (for analog system)
123	VRTA	I	A/D converter reference input terminal
124	ADC0	I	Tracking error signal input from the RF amplifier
125	ADC1	I	Focusing error signal input from the RF amplifier
126	ADC2	I	Pull-in signal input from the RF amplifier
127	ADC3	I	Tracking coil drive signal input terminal
128	ADC4	I	Spindle motor drive signal input terminal
129, 130	ADC5, ADC6	I	Reference voltage input from the motor/coil driver
131	ADC7	I	Monitor signal input from the RF amplifier
132	VSSA5	—	Ground terminal (for analog system)
133	VDDA5 3.3V	—	Power supply terminal (+3.3V) (for analog system)

Pin No.	Pin Name	I/O	Description
134 to141	D0 to D7	I/O	Two-way data bus terminal
142	VDD3.3V	—	Power supply terminal (+3.3V) (for digital system)
143, 144	PWM0, PWM1	O	Sled motor drive signal output terminal
145	VSS	—	Ground terminal (for digital system)
146	PWM2	O	PWM signal output terminal
147	DFCT	I	Defect signal input from the RF amplifier
148	MIRR	I	Mirror signal input from the RF amplifier
149	VDD1.8V	—	Power supply terminal (+1.8V) (for digital system)
150	CLKIN	I	Clock signal input from the clock generator
151	VSS	—	Ground terminal (for digital system)
152	TZC	I	Tracking zero crossing signal input from the RF amplifier
153	GIO0/INT2	I	Limit in detect switch input terminal
154	GIO1/INT3	O	Spindle motor drive control signal output terminal
155	GIO2/INT4	O	Thermal shut down signal output to the motor/coil driver
156	GIO3/INT5	I/O	Not used
157	GIO4/PGREF	I/O	Not used
158	GIO5/PGIN	I	Signal detection signal input from the RF amplifier
159	GIO6/SDI	I	Serial data input from the RF amplifier
160	VDD3.3V	—	Power supply terminal (+3.3V) (for digital system)
161	GIO7/SDO	O	Serial data output to the RF amplifier
162	GIO8/SCK	O	Serial clock signal output to the RF amplifier
163	GIO9/FGREF	I/O	Not used
164	GIO10/FGIN	I/O	Not used
165	GIO11/TMC2	O	Interruption control signal output to the RF amplifier
166	GIO12	I/O	Not used
167	GIO13	O	Serial data enable signal output to the RF amplifier
168	VSS	—	Ground terminal (for digital system)
169	DATA/EMU1	O	Serial data output to the AV decoder
170	BCLK/EMU1	O	Bit clock signal output to the AV decoder
171	TRST	I	Reset signal input from the interface controller
172	TMS	I	Mode selection signal input terminal
173	TDI	I	Serial data input from the mechanism controller
174	TCK	I	Clock signal input terminal
175	LRCK/TDO	O	L/R sampling clock signal output to the AV decoder and serial data output to the DSD decoder
176	VDD1.8V	—	Power supply terminal (+1.8V) (for digital system)

• **MB BOARD IC403 CXD1935Q (AV DECODER)**

Pin No.	Pin Name	I/O	Description
1	IOVDD00	—	Power supply terminal (+3.3V) (for digital system)
2 to 5	HDATA0 to HDATA3	I/O	Two-way data bus terminal
6	CVS00	—	Ground terminal (for digital system)
7 to 10	HDATA4 to HDATA7	I/O	Two-way data bus terminal
11	CVD00	—	Power supply terminal (+1.8V) (for digital system)
12 to 15	HDATA8 to HDATA11	I/O	Two-way data bus terminal
16	IOVSS00	—	Ground terminal (for digital system)
17 to 20	HDATA12 to HDATA15	I/O	Two-way data bus terminal
21	CVS01	—	Ground terminal (for digital system)
22	ACLK	I	Audio clock signal input from the clock generator
23	CVD01	—	Power supply terminal (+1.8V) (for digital system)
24	ACH12O	O	Audio data (for front) output to the audio DSP
25	ACH34O	O	Audio data (for rear) output to the audio DSP
26	ACH56O	O	Audio data (for center and woofer) output to the audio DSP
27	IOVDD01	—	Power supply terminal (+3.3V) (for digital system)
28	LRCKO	O	L/R sampling clock output to the audio DSP
29	BCKO	O	Bit clock output to the audio DSP
30	DO	O	Serial data output terminal Not used
31	CDIN2I	I	Digital audio data input from the DSP
32	CDIN1I	I	Serial data input from the DSP
33	IOVSS01	—	Ground terminal (for digital system)
34	CDBCKI	I	Bit clock input from the DSP
35	CDLRKI	I	L/R sampling clock input from the DSP
36	CVS02	—	Ground terminal (for digital system)
37 to 40	DT0I to DT3I	I	Stream data input from the DSP
41	IOVDD02	—	Power supply terminal (+3.3V) (for digital system)
42 to 45	DT4I to DT7I	I	Stream data input from the DSP
46	CVD02	—	Power supply terminal (+1.8V) (for digital system)
47	ICLKI	I	Stream data bus clock signal input from the DSP
48	IERRIN	I	Stream data bus error flag signal input from the DSP
49	ISTARTIN	I	Stream data bus header signal input from the DSP
50	IVALIN	I	Stream data bus acknowledge signal input from the DSP
51	IREQON	O	Stream data bus request signal output to the DSP
52	IOVSS02	—	Ground terminal (for digital system)
53	IOAVSS00	—	Ground terminal (for analog system)
54	AVDD00	—	Power supply terminal (+3.3V) (for analog system)
55	YOUT	O	Y (luminance) analog video signal output terminal Not used
56	AVSS00	—	Ground terminal (for analog system)
57	GOUT	O	Green analog video signal output terminal Not used
58	AVDD01	—	Power supply terminal (+3.3V) (for analog system)
59	ROUT	O	Red analog video signal output terminal Not used
60	AVSS01	—	Ground terminal (for analog system)

Pin No.	Pin Name	I/O	Description
61	BOUT	O	Blue analog video signal output terminal Not used
62	AVDD02	—	Power supply terminal (+3.3V) (for analog system)
63	COUT	O	C (chroma) analog video signal output terminal Not used
64	AVSS02	—	Ground terminal (for analog system)
65	COMPOUT	O	Composite analog video signal output terminal Not used
66	DVSS33	—	Ground terminal (for digital system)
67	DVDD33	—	Power supply terminal (+3.3V) (for digital system)
68	VGO	I	Connected to the power supply (+3.3V) with capacitor
69	IOAVDD00	—	Power supply terminal (+3.3V) (for analog system)
70, 71	VREF	I	D/A converter reference voltage input terminal
72	IOVDD03	—	Power supply terminal (+3.3V) (for digital system)
73	FLEDO	O	Field ID output terminal Not used
74	HSYNCO	O	Horizontal sync signal terminal Not used
75	CVS03	—	Ground terminal (for digital system)
76, 77	DSPACK0, DSPACK1	I	Acknowledge signal input from the audio DSP
78	CVD03	—	Power supply terminal (+1.8V) (for digital system)
79	IOVSS03	—	Ground terminal (for digital system)
80	I2C_CLK	—	Not used
81	CVS04	—	Ground terminal (for digital system)
82	I2C_DATA	—	Not used
83	IOVDD04	—	Power supply terminal (+3.3V) (for digital system)
84 to 87	DVO0 to DVO3	O	Digital video signal output to the I/P converter
88	CVD04	—	Power supply terminal (+1.8V) (for digital system)
89 to 92	DVO4 to DVO7	O	Digital video signal output to the I/P converter
93	BF_ID	O	Blending factor exist ID output terminal Not used
94	NC	—	Not used
95	D1CLKO	O	Digital video clock (27 MHz) output to the I/P converter
96	IOVSS04	—	Ground terminal (for digital system)
97	TDI	I	Serial data input from the I/P converter
98	TDO	O	Serial data output terminal
99	TCK	I	Clock signal input terminal
100	IOVDD05	—	Power supply terminal (+3.3V) (for digital system)
101	TMS	I	Mode selection signal input terminal
102	TRST	I	Reset signal input from the interface controller “L”: reset
103	CVS05	—	Ground terminal (for digital system)
104	IOVSS05	—	Ground terminal (for digital system)
105 to 108	SDAD2O to SDAD5O	O	Address signal output to the SD-RAM
109	CVD05	—	Power supply terminal (+1.8V) (for digital system)
110 to 113	SDAD0O, SDAD1O, SDAD6O, SDAD7O	O	Address signal output to the SD-RAM
114	IOVDD06	—	Power supply terminal (+3.3V) (for digital system)
115, 116	SDAD8O, SDAD10O	O	Address signal output to the SD-RAM
117	SDAD12O	O	Address signal output terminal Not used
118	SDAD9O	O	Address signal output to the SD-RAM

Pin No.	Pin Name	I/O	Description
119	IOVSS06	—	Ground terminal (for digital system)
120	SDAD11O	O	Address signal output to the SD-RAM
121, 122	SDCS0ON, SDCS1ON	O	Chip select signal output to the SD-RAM
123	IOVDD07	—	Power supply terminal (+3.3V) (for digital system)
124	SDCKEO	O	Clock enable signal output to the SD-RAM
125	SDRASON	O	Row address strobe signal output to the SD-RAM
126	IOVSS07	—	Ground terminal (for digital system)
127	SDCLKO	O	Clock (108 MHz) signal output to the SD-RAM
128	IOVDD08	—	Power supply terminal (+3.3V) (for digital system)
129	SDCASON	O	Column address strobe signal output to the SD-RAM
130	SDWEON	O	Write enable signal output to the SD-RAM
131	CVS06	—	Ground terminal (for digital system)
132, 133	SDDQM0O, SDDQM1O	O	DQM signal output to the SD-RAM
134	IOVSS08	—	Ground terminal (for digital system)
135 to 138	SDDQ6 to SDDQ9	I/O	Two-way data bus with the SD-RAM
139	CVD06	—	Power supply terminal (+1.8V) (for digital system)
140 to 143	SDDQ4, SDDQ5, SDDQ10, SDDQ11	I/O	Two-way data bus with the SD-RAM
144	IOVDD09	—	Power supply terminal (+3.3V) (for digital system)
145 to 148	SDDQ2, SDDQ5, SDDQ12, SDDQ13	I/O	Two-way data bus with the SD-RAM
149	IOVSS09	—	Ground terminal (for digital system)
150, 151	SDDQ1, SDDQ14	I/O	Two-way data bus with the SD-RAM
152	IOVDD10	—	Power supply terminal (+3.3V) (for digital system)
153, 154	SDDQ0, SDDQ15	I/O	Two-way data bus with the SD-RAM
155	IOVSS10	—	Ground terminal (for digital system)
156	CRPCLKI	I	Not used
157	TESTI	I	Input terminal for the test (normally: fixed at “H”)
158	CLKI	I	Clock (27 MHz) signal input from the clock generator
159	PAVDD18P	—	Power supply terminal (+3.3V) (for analog system)
160	SCLKI	I	System clock (27 MHz) signal input from the clock generator
161	PAVSS18G	I	Ground terminal (for analog system)
162	MBIST_EN	I	Not used
163	SCAN_MOD	I	Not used
164	SCAN_EN	I	Not used
165	IOVDD11	—	Power supply terminal (+3.3V) (for digital system)
166, 167	HAD22I, HAD23I	I	Chip select signal input from the system controller
168, 169	HAD20I, HAD21I	I	Address signal input terminal
170	CVS07	—	Ground terminal (for digital system)
171 to 174	HAD16I to HAD19I	I	Address signal input terminal
175	IOVSS11	—	Ground terminal (for digital system)
176 to 179	HAD12I to HAD15I	I	Address signal input terminal
180	CVD07	—	Power supply terminal (+1.8V) (for digital system)
181 to 184	HAD8I to HAD11I	I	Address signal input terminal
185	IOVDD12	—	Power supply terminal (+3.3V) (for digital system)

Pin No.	Pin Name	I/O	Description
186 to 189	HAD4I to HAD7I	I	Address signal input terminal
190	CVS08	—	Ground terminal (for digital system)
191 to 194	HAD3I to HAD0I	I	Address signal input terminal
195	IOVSS12	—	Ground terminal (for digital system)
196	HCSN	I	Read enable signal input from the system controller
197	HRWN	I	Write enable signal input from the system controller
198	HCPUMDI	I	CPU mode selection signal input terminal
199	HIRQON	O	Interrupt signal output to the system controller
200	HWAITON	O	Wait signal output to the system controller
201	CVD08	—	Power supply terminal (+1.8V) (for digital system)
202	DMACK1IN	I	Acknowledge signal input from the system controller
203	DMARQ1ON	O	Request signal input from the system controller
204	DMACK0IN	I	Acknowledge signal input from the system controller
205	DMARQ0ON	O	Request signal input from the system controller
206	IOVDD13	—	Power supply terminal (+3.3V) (for digital system)
207	RSTN	I	Reset signal input from the system controller “L”: reset
208	IOVSS13	—	Ground terminal (for digital system)

• **MB BOARD IC501 CXD1938AR (AUDIO DIGITAL SIGNAL PROCESSOR)**

Pin No.	Pin Name	I/O	Description
1	CVD00	—	Power supply terminal (+1.8V) (digital system)
2	DSP1ACKO2	O	Acknowledge signal output terminal Not used
3, 4	DSP1ACKO0, DSP1ACKO1	O	Acknowledge signal output to the AV decoder
5	GND00	—	Ground terminal (digital system)
6	RESET_NI	I	Reset signal input from the system controller "L": reset
7	GND01	—	Ground terminal (digital system)
8	DSP1DIACKI	I	Audio clock signal input terminal Not used
9	GND02	—	Ground terminal (digital system)
10	DSP1DII	I	Digital audio data input from the DSP
11	IOVDD0	—	Power supply terminal (+3.3V) (digital system)
12	GND03	—	Ground terminal (digital system)
13	CVD01	—	Power supply terminal (+1.8V) (digital system)
14	PLL27_CLNI	I	PLL clock divider reset signal input terminal Not used
15	PLL_ENNI	I	PLL enable signal input terminal Not used
16	PLL_CLNI	I	PLL clock divider reset signal input terminal Not used
17	GND04	—	Ground terminal (digital system)
18	PLL_CLKO	O	PLL clock signal output terminal Not used
19	IOVDD1	—	Power supply terminal (+3.3V) (digital system)
20	PLL_AVDD	O	Power supply terminal (+3.3V) (analog system)
21	GND05	—	Ground terminal (digital system)
22	SCLKI	I	Clock (27 MHz) signal input from the clock generator
23	GND06	—	Ground terminal (digital system)
24	PLL_TST1I	I	Input terminal for the test (normally: fixed at "L")
25, 26	PLL_TST2I, PLL_TST3I	I	Input terminal for the test (normally: fixed at "H")
27	PLL_TST4I	I	Input terminal for the test (normally: fixed at "L")
28	PLL_AVSS	—	Ground terminal (analog system)
29	IOVDD2	—	Power supply terminal (+3.3V) (digital system)
30	GND07	—	Ground terminal (digital system)
31	CVD02	—	Power supply terminal (+1.8V) (digital system)
32	DSP2DII	I	Digital audio data input from the DSP
33	GND08	—	Ground terminal (digital system)
34	DSP2DIACKI	I	Audio clock signal input terminal Not used
35	GND09	—	Ground terminal (digital system)
36 to 38	DSP2ACKO0 to DSP2ACKO2	O	Acknowledge signal output terminal Not used
39	IOVDD3	—	Power supply terminal (+3.3V) (digital system)
40	GND10	—	Ground terminal (digital system)
41	CVD03	—	Power supply terminal (+1.8V) (digital system)
42	DSP2LRCKO	O	L/R sampling clock output to the D/A converter
43	DSP2BCKO	O	Bit clock output to the D/A converter
44	DSP2EMPO	O	Emphasis control signal output terminal Not used
45	DSP2DO	O	Digital audio data output terminal
46	IOVDD4	—	Power supply terminal (+3.3V) (digital system)
47	GND11	—	Ground terminal (digital system)

Pin No.	Pin Name	I/O	Description
48	DSP2CH12O	O	Audio data (for front) output to the D/A converter
49	DSP2CH34O	O	Audio data (for rear) output to the D/A converter
50	DSP2CH56O	O	Audio data (for center and woofer) output to the D/A converter
51	DSP2CH78O	O	Audio data output to the D/A converter
52	CVD04	—	Power supply terminal (+1.8V) (digital system)
53	GND12	—	Ground terminal (digital system)
54	IOVDD5	—	Power supply terminal (+3.3V) (digital system)
55	DSP2LRCKI	I	L/R sampling clock input from the AV decoder
56	DSP2CH12I	I	Audio data (for front) input from the AV decoder
57	DSP2CH34I	I	Audio data (for rear) input from the AV decoder
58	DSP2CH56I	I	Audio data (for center and woofer) input from the AV decoder
59	DSP2EMPI	I	Emphasis control signal input terminal Not used
60	IOVDD6	—	Power supply terminal (+3.3V) (digital system)
61	GND13	—	Ground terminal (digital system)
62	CVD05	—	Power supply terminal (+1.8V) (digital system)
63	DSP2REQI	I	Request signal input terminal Not used
64	GND14	—	Ground terminal (digital system)
65	DSP2NMII	I	Non-maskable interrupt signal input terminal Not used
66	GND15	—	Ground terminal (digital system)
67	DSP2ACKI	I	Audio clock signal input from the clock generator
68	GND16	—	Ground terminal (digital system)
69	DSP2BCKI	I	Bit clock input from the AV decoder
70	GND17	—	Ground terminal (digital system)
71	IOVDD7	—	Power supply terminal (+3.3V) (digital system)
72	GND18	—	Ground terminal (digital system)
73	CVD06	—	Power supply terminal (+1.8V) (digital system)
74 to 77	ADDR015 to ADDR018	—	Address signal output terminal Not used
78	IOVDD8	—	Power supply terminal (+3.3V) (digital system)
79	GND19	—	Ground terminal (digital system)
80 to 83	ADDR011 to ADDR014	—	Address signal output terminal Not used
84	IOVDD9	—	Power supply terminal (+3.3V) (digital system)
85	GND20	—	Ground terminal (digital system)
86	CVD07	—	Power supply terminal (+1.8V) (digital system)
87 to 90	ADDR07 to ADDR010	—	Address signal output terminal Not used
91	IOVDD10	—	Power supply terminal (+3.3V) (digital system)
92	GND21	—	Ground terminal (digital system)
93 to 96	ADDR03 to ADDR06	—	Address signal output terminal Not used
97	IOVDD11	—	Power supply terminal (+3.3V) (digital system)
98	GND22	—	Ground terminal (digital system)
99	CVD08	—	Power supply terminal (+1.8V) (digital system)
100 to 102	ADDR00 to ADDR02	—	Address signal output terminal Not used
103	SRM_RDNO	O	Read enable signal output terminal Not used

Pin No.	Pin Name	I/O	Description
104	IOVDD12	—	Power supply terminal (+3.3V) (digital system)
105	GND23	—	Ground terminal (digital system)
106	SRM_WRNO	O	Write enable signal output terminal Not used
107	CMD_ACKNO	O	Interrupt signal output to the system controller
108	CMD_REQNO	O	Request signal output terminal Not used
109	DMA_ACKNO	O	Acknowledge signal output terminal Not used
110	IOVDD13	—	Power supply terminal (+3.3V) (digital system)
111	GND24	—	Ground terminal (digital system)
112	CVD09	—	Power supply terminal (+1.8V) (digital system)
113	STC_CLKI	I	System clock signal input terminal Not used
114	GND25	—	Ground terminal (digital system)
115	SH_CLKI	I	Serial clock input from the system controller
116	GND26	—	Ground terminal (digital system)
117	SH_SII	I	Serial data input from the system controller
118	SH_CSNI	I	Chip select signal input from the system controller
119	SH_SOO	O	Serial data output to the system controller
120	IOVDD14	—	Power supply terminal (+3.3V) (digital system)
121	GND27	—	Ground terminal (digital system)
122	CVD10	—	Power supply terminal (+1.8V) (digital system)
123, 124	DATAI00, DATAI01	I/O	Two-way data bus terminal Not used
125	GND28	—	Ground terminal (digital system)
126, 127	DATAI02, DATAI03	I/O	Two-way data bus terminal Not used
128	IOVDD15	—	Power supply terminal (+3.3V) (digital system)
129	GND29	—	Ground terminal (digital system)
130, 131	DATAI04, DATAI05	I/O	Two-way data bus terminal Not used
132	GND30	—	Ground terminal (digital system)
133, 134	DATAI06, DATAI07	I/O	Two-way data bus terminal Not used
135	IOVDD16	—	Power supply terminal (+3.3V) (digital system)
136	GND31	—	Ground terminal (digital system)
137	CVD11	—	Power supply terminal (+1.8V) (digital system)
138	XSCAN	I	Scan mode signal input terminal Not used
139	TDO	O	Serial data output to the AV decoder
140	TDI	I	Serial data input from the DSD decoder
141	TMS	I	Mode selection signal input terminal
142	TRST	I	Reset signal input from the interface controller “L”: reset
143	TCK	I	Clock signal input terminal
144	IOVDD17	—	Power supply terminal (+3.3V) (digital system)
145	GND32	—	Ground terminal (digital system)
146	CVD12	—	Power supply terminal (+1.8V) (digital system)
147	DSP1BCKI	I	Bit clock signal input from the AV decoder
148	GND33	—	Ground terminal (digital system)
149	DSP1ACKI	I	Audio clock signal input from the clock generator
150	GND34	—	Ground terminal (digital system)

Pin No.	Pin Name	I/O	Description
151	DSP1NMII	I	Non-maskable interrupt signal input terminal Not used
152	GND35	—	Ground terminal (digital system)
153	DSP1REQI	I	Request signal input terminal Not used
154	IOVDD18	—	Power supply terminal (+3.3V) (digital system)
155	GND36	—	Ground terminal (digital system)
156	CVD13	—	Power supply terminal (+1.8V) (digital system)
157	DSP1EMPI	I	Emphasis control signal input terminal Not used
158	DSP1CH56I	I	Audio data (for center and woofer) input from the AV decoder
159	DSP1CH34I	I	Audio data (for rear) input from the AV decoder
160	DSP1CH12I	I	Audio data (for front) input from the AV decoder
161	DSP1LRCKI	I	L/R sampling clock signal input from the AV decoder
162	IOVDD19	—	Power supply terminal (+3.3V) (digital system)
163	GND37	—	Ground terminal (digital system)
164	CVD14	—	Power supply terminal (+1.8V) (digital system)
165	DSP1CH78O	O	Audio data output terminal Not used
166	DSP1CH56O	O	Audio data (for center and woofer) output terminal Not used
167	DSP1CH34O	O	Audio data (for rear) output terminal Not used
168	DSP1CH12O	O	Audio data (for front) output terminal Not used
169	IOVDD20	—	Power supply terminal (+3.3V) (digital system)
170	GND38	—	Ground terminal (digital system)
171	DSP1DO	O	Digital audio data output terminal Not used
172	DSP1EMPO	O	Emphasis control signal output terminal Not used
173	DSP1BCKO	O	Bit clock signal output terminal Not used
174	DSP1LRCKO	O	L/R sampling clock signal output terminal Not used
175	IOVDD21	—	Power supply terminal (+3.3V) (digital system)
176	GND39	—	Ground terminal (digital system)

• MB BOARD IC602 CXD9698R (INTERLACE/PROGRESSIVE CONVERTER)

Pin No.	Pin Name	I/O	Description
1	OVDD	—	Power supply terminal (+3.3V)
2	CLKI	I	Digital video clock signal (27 MHz) input from the AV decoder
3	PLL_TEST	I	Input terminal for the test (normally: fixed at “L”)
4	PLL_EN	I	PLL enable signal input terminal Not used
5, 6	PI0, PI1	I	Digital video signal input terminal Not used
7 to 14	PI2 to PI9	I	Digital video signal input from the AV decoder
15	NHSI	I	Horizontal sync signal input terminal Not used
16	NVSI	I	Vertical sync signal input terminal Not used
17	OVSS	—	Ground terminal (for digital system)
18	IVSS	—	Ground terminal (for digital system)
19	CVSS	—	Ground terminal (for digital system)
20	NVSO	O	Vertical sync signal output terminal Not used
21	NHSI	O	Horizontal sync signal output terminal Not used
22 to 25	PO9 to PO6	O	Digital video signal output to the D/A converter
26	OVDD	—	Power supply terminal (+3.3V)
27	OVSS	—	Ground terminal (for digital system)
28 to 31	PO5 to PO2	O	Digital video signal output to the D/A converter
32, 33	PO1, PO0	O	Digital video signal output terminal Not used
34	TEST0	I	Input terminal for the test (normally: fixed at “L”)
35	OVSS	—	Ground terminal (for digital system)
36	OVDD	—	Power supply terminal (+3.3V)
37	CVDD	—	Power supply terminal (+2.5V)
38, 39	TEST1, TEST2	I	Input terminal for the test (normally: fixed at “L”)
40	CLKO	I	Clock signal (27 MHz) output to the D/A converter
41 to 45	YO9 to YO5	O	Y (luminance) digital video signal output to the D/A converter
46	OVDD	—	Power supply terminal (+3.3V)
47	OVSS	—	Ground terminal (for digital system)
48 to 52	YO4 to YO0	O	Y (luminance) digital video signal output to the D/A converter
53	OVDD	—	Power supply terminal (+3.3V)
54	CVSS	—	Ground terminal (for digital system)
55	OVSS	—	Ground terminal (for digital system)
56 to 60	CO0 to CO4	O	C (chroma) digital video signal output to the D/A converter
61	OVDD	—	Power supply terminal (+3.3V)
62	OVSS	—	Ground terminal (for digital system)
63 to 67	CO5 to CO9	O	C (chroma) digital video signal output to the D/A converter
68	FILM	O	Film detection flag output terminal Not used
69	W3IF	I	MPU interface communication protocol selection signal input terminal Not used
70	OVSS	—	Ground terminal (for digital system)
71	CVDD	—	Power supply terminal (+2.5V)
72	IVDD	—	Power supply terminal (+3.3V)
73	OVDD	—	Power supply terminal (+3.3V)
74 to 77	MD19 to MD16	I/O	Two-way data bus terminal Not used
78	OVDD	—	Power supply terminal (+3.3V)
79	OVSS	—	Ground terminal (for digital system)
80 to 83	MA2 to MA5	O	Address signal output to the SD-RAM

Pin No.	Pin Name	I/O	Description
84	OVDD	—	Power supply terminal (+3.3V)
85	OVSS	—	Ground terminal (for digital system)
86 to 89	MA0, MA1, MA6, MA7	O	Address signal output to the SD-RAM
90	OVSS	—	Ground terminal (for digital system)
91	IVSS	—	Ground terminal (for digital system)
92	CVSS	—	Ground terminal (for digital system)
93	OVDD	—	Power supply terminal (+3.3V)
94 to 97	MA8 to MA11	O	Address signal output to the SD-RAM
98	OVDD	—	Power supply terminal (+3.3V)
99	OVSS	—	Ground terminal (for digital system)
100	RAS	O	Row address strobe signal output to the SD-RAM
101	CKE	O	Clock enable signal output terminal Not used
102	CAS	O	Column address strobe signal output to the SD-RAM
103	MCLK	O	Clock signal (54 MHz) output to the SD-RAM
104	WE	O	Write enable signal output to the SD-RAM
105, 106	TEST3, TEST4	I	Input terminal for the test (normally: fixed at “L”)
107	OVSS	—	Ground terminal (for digital system)
108	OVDD	—	Power supply terminal (+3.3V)
109	CVDD	—	Power supply terminal (+2.5V)
110 to 113	MD7 to MD9	I/O	Two-way data bus with the SD-RAM
114	OVDD	—	Power supply terminal (+3.3V)
115	OVSS	—	Ground terminal (for digital system)
116 to 119	MD4, MD5, MD10, MD11	I/O	Two-way data bus with the SD-RAM
120	OVDD	—	Power supply terminal (+3.3V)
121	OVSS	—	Ground terminal (for digital system)
122 to 125	MD2, MD3, MD12, MD13	I/O	Two-way data bus with the SD-RAM
126	OVSS	—	Ground terminal (for digital system)
127	CVSS	—	Ground terminal (for digital system)
128	OVDD	—	Power supply terminal (+3.3V)
129 to 132	MD0, MD1, MD14, MD15	I/O	Two-way data bus with the SD-RAM
133	SLV	I	MPU interface slave address selection signal input terminal Not used
134	CSB	I	MPU interface chip select signal input terminal Not used
135	SDA	I/O	Two-way data bus with the EEPROM, system controller and D/A converter
136	SCL	I	Clock signal input from the system controller
137	SRN	I	Reset signal input from the system controller “L”: reset
138	OVSS	—	Ground terminal (for digital system)
139	CVDD	—	Power supply terminal (+2.5V)
140	PLL_VDD	—	Power supply terminal (+2.5V) (for PLL)
141	CPOUT	O	PLL charge pump output terminal
142	VCOIN	I	PLL external loop filter input terminal
143	PLL_GND	—	Ground terminal (for PLL)
144	IVDD	—	Power supply terminal (+3.3V)

• **MB BOARD IC701 CXD9705R (MECHANISM CONTROLLER)**

Pin No.	Pin Name	I/O	Description
1	HD15	I/O	Two-way data bus terminal
2	VSS	—	Ground terminal
3 to 9	HD14 to HD8	I/O	Two-way data bus terminal
10, 11	HA19, HA4	O	Address signal output terminal
12	VSS	—	Ground terminal
13 to 16	HA3 to HA0	O	Address signal output terminal
17	XGAIT	O	Interrupt signal output to the system controller
18	XWR	I	Write enable signal input from the system controller
19	XRD	I	Read enable signal input from the system controller
20	XGACS	I	Chip select signal input from the system controller
21	WOBBLE	I	Not used
22	ADVDD	—	Power supply terminal (+3.3V)
23	VSS	—	Ground terminal
24	CPUCK	I	Master clock (33 MHz) input from the system controller
25	TSENS2	I	Table position sensor 2 input terminal
26	TSENS4	I	Table position sensor 4 input terminal
27	LD_IN	I	Loading detect switch input terminal “L”: loading in
28	LD_OUT	I	Loading detect switch input terminal “L”: loading out
29	LOCK	I	Lock detect switch input terminal “L”: lock
30	TSENS3	I	Table position sensor 3 input terminal
31	TSENS1	I	Table position sensor 1 input terminal
32	(NC)	I	Not used
33	VDD	—	Power supply terminal (+3.3V)
34	XRST	I	Reset signal input from the system controller “L”: reset
35	VPD	—	Not used
36	POPUP	I	Pop detect switch input terminal “L”: pop up
37	POPDOWN	I	Pop detect switch input terminal “L”: pop down
38	DR_OP	I	Door detect switch input terminal “L”: door open
39	DR_CLS	I	Door detect switch input terminal “L”: door close
40	ADVDD2	—	Power supply terminal (+3.3V)
41	TRST	I	Reset signal input from the interface controller “L”: reset
42	VSS	—	Ground terminal
43	TCK	I	Clock signal input terminal
44	TMS	I	Mode selection signal input terminal
45	TDI	I	Serial data input terminal
46	NFBUSY	I	Busy signal input from the nand flash memory
47	ADVDD3	—	Power supply terminal (+3.3V)
48	NFCE	O	Chip enable signal output to the nand flash memory
49	NFCLE	O	Command latch enable signal output to the nand flash memory
50	NFALE	O	Address latch enable signal output to the nand flash memory
51	NFWP	O	Write protect signal output to the nand flash memory
52	VSS	—	Ground terminal
53	NFRE	O	Read enable signal output to the nand flash memory
54	NFWE	O	Write enable signal output to the nand flash memory
55	NFTEST	O	Test mode selection signal output to the nand flash memory

Pin No.	Pin Name	I/O	Description
56	(NC)	O	Not used
57	XADYCS	O	Chip select signal output terminal Not used
58	XESCS	O	Chip select signal output terminal Not used
59, 60	(NC)	O	Not used
61	TESTI	I	Input terminal for the test (normally: fixed at “L”)
62	TESTO5	O	Output terminal for the test
63	VSS	—	Ground terminal
64 to 68	TESTO4 to TESTO0	O	Output terminal for the test
69	LDM+	O	Loading motor drive signal output terminal
70	LDM–	O	Loading motor drive signal output terminal
71	DRM+	O	Door motor drive signal output terminal
72	DRM–	O	Door motor drive signal output terminal
73	VDD	—	Power supply terminal (+3.3V)
74	DIMMO	O	LED drive signal output for the illumination “H”: LED on
75	DSEN_OUT	O	Not used
76	HH_OUT	O	Not used
77	TRM–	O	Table motor drive signal output terminal
78	TRM+	O	Table motor drive signal output terminal
79	TDO	O	Serial data output to the DSP
80	ADVDD4	—	Power supply terminal (+3.3V)

• **MB BOARD IC905 CXD2753R (DSD DECODER)**

Pin No.	Pin Name	I/O	Description
1	VSC	—	Ground terminal (for core)
2	XMSLAT	I	Chip select signal input from the system controller
3	MSCK	I	Serial clock signal input from the system controller
4	MSDATI	I	Serial data input from the system controller
5	VDC	—	Power supply terminal (+2.5V) (for core)
6	MSDATO	O	Serial data output to the system controller
7	MSREADY	O	Ready signal output to the system controller
8	XMSDOE	O	Serial data output enable signal output terminal Not used
9	XRST	I	Reset signal input from the system controller "L": reset
10	SMUTE	I	Soft muting control signal input from the system controller
11	MCKI	I	Master clock signal (33.8688 MHz) input from the clock generator
12	VSIO	—	Ground terminal (for I/O)
13, 14	EXCKO1, EXCKO2	O	External clock signal output terminal Not used
15	LRCK	O	L/R sampling clock signal output terminal Not used
16	FRAME	O	Not used
17	VDIO	—	Power supply terminal (+3.3V) (for I/O)
18 to 21	MNT0 to MNT7	O	Monitor signal output terminal Not used
22 to 25	TEST0	I	Input terminal for the test (normally: fixed at "L")
26	TCK	I	Clock signal input terminal
27	TDI	I	Serial data input from the DSP
28	VSC	—	Ground terminal (for core)
29	TDO	O	Serial data output to the audio DSP
30	TMS	I	Selection signal input terminal
31	TRST	I	Reset signal input from the interface controller "L": reset
32 to 34	TEST1 to TEST3	I	Input terminal for the test (normally: fixed at "L")
35	VDC	—	Power supply terminal (+2.5V) (for core)
36	TESTO	O	Output terminal for the test
37	XBIT	O	Not used
38 to 41	SUPDT0 to SUPDT3	O	Supplementary data output terminal Not used
42	VSIO	—	Ground terminal (for I/O)
43, 44	SUPDT4, SUPDT5	O	Supplementary data output terminal Not used
45	VDIO	—	Power supply terminal (+3.3V) (for I/O)
46, 47	SUPDT6, SUPDT7	O	Supplementary data output terminal Not used
48	XSUPAK	O	Supplementary data acknowledge signal output terminal Not used
49	VSC	—	Ground terminal (for core)
50	DSAEXR	O	Not used
51, 52	TESTI	I	Input terminal for the test (normally: fixed at "L")
53	TESTO	O	Output terminal for the test
54	VDC	—	Power supply terminal (+2.5V) (for core)
55	DSADML	O	DSD data output for L-ch down mix to the D/A converter
56	DSADMR	O	DSD data output for R-ch down mix to the D/A converter
57	BCKASL	I	Input/output selection signal input terminal of bit clock signal for DSD data output "L": input (slave), "H": output (master) Fixed at "H" in this set

Pin No.	Pin Name	I/O	Description
58	VSDSD	—	Ground terminal (for DSD data output)
59	BCKAI	I	Bit clock signal input terminal for DSD data output Not used
60	BCKAO	O	Bit clock signal output terminal for DSD data output Not used
61	PHREFI	I	Clock signal input terminal for DSD data output Not used
62	PHREFO	O	Clock signal output to the D/A converter
63	ZDFL	O	Zero data flag (for front L-ch) detection signal output terminal Not used
64	DSAL	O	DSD data (for front L-ch) output to the D/A converter
65	ZDFR	O	Zero data flag (for front R-ch) detection signal output terminal Not used
66	DSAR	O	DSD data (for front R-ch) output to the D/A converter
67	VDDSD	—	Power supply terminal (+3.3V) (for DSD data output)
68	ZDFC	O	Zero data flag (for center) detection signal output terminal Not used
69	DSAC	O	DSD data (for center) output to the D/A converter
70	ZDFLFE	O	Zero data (for woofer) flag detection signal output terminal Not used
71	DSASW	O	DSD data (for woofer) output to the D/A converter
72	VSDSD	—	Ground terminal (for DSD data output)
73	ZDFLS	O	Zero data flag (for rear L-ch) detection signal output terminal Not used
74	DSALS	O	DSD data (for rear L-ch) output to the D/A converter
75	ZDFRS	O	Zero data flag (for rear R-ch) detection signal output terminal Not used
76	DSARS	O	DSD data (for rear R-ch) output to the D/A converter
77	VDDSD	—	Power supply terminal (+3.3V) (For DSD data output)
78, 79	TESTO	O	Output terminal for the test
80	VSC	—	Ground terminal (for core)
81, 82	TESTO	O	Output terminal for the test
83	VDC	—	Power supply terminal (+2.5V) (for core)
84, 85	TESTO	O	Output terminal for the test
86	VSIO	—	Ground terminal (for I/O)
87	TESTO	O	Output terminal for the test
88, 89	TESTI	I	Input terminal for the test (normally: fixed at “L”)
90	VDIO	—	Power supply terminal (+3.3V) (for I/O)
91 to 93	TESTO	O	Output terminal for the test
94	TESTI	I	Input terminal for the test (normally: fixed at “H”)
95	TESTI	I	Input terminal for the test (normally: fixed at “L”)
96	TESTI	I	Input terminal for the test (normally: fixed at “H”)
97	TESTO	O	Output terminal for the test
98	IHOLD	O	Not used
99	VDC	—	Power supply terminal (+2.5V) (for core)
100 to 105	TESTI	I	Input terminal for the test (normally: fixed at “L”)
106	VSIO	—	Ground terminal (for I/O)
107 to 109	TESTI	I	Input terminal for the test (normally: fixed at “L”)
110	VDIO	—	Power supply terminal (+3.3V) (for I/O)
111 to 114	WAD0 to WAD3	I	External A/D data input terminal for PSP physical disc mark detection Not used
115	VSIO	—	Ground terminal (for I/O)
116	VSC	—	Ground terminal (for core)
117 to 120	WAD4 to WAD7	I	External A/D data input terminal for PSP physical disc mark detection Not used
121	VDC	—	Power supply terminal (+2.5V) (for core)
122	TESTI	I	Input terminal for the test (normally: fixed at “L”)

Pin No.	Pin Name	I/O	Description
123	WCK	I	Operation clock signal input for PSP physical disc mark detection from the DSP
124, 125	WAVDD0, WAVDD1	—	A/D power supply terminal (+2.5V) (for PSP physical disc mark detection)
126	WARFI	I	Analog RF signal input for PSP physical disc mark detection from the RF amplifier
127	WAVRB	I	A/D bottom reference terminal for PSP physical disc mark detection
128, 129	WAVSS0, WAVSS1	—	A/D ground terminal (for PSP physical disc mark detection)
130	VSIO	—	Ground terminal (for I/O)
131 to 134	DQ7 to DQ4	I/O	Two-way data bus with the SD-RAM
135	VDIO	—	Power supply terminal (+3.3V) (for I/O)
136 to 139	DQ3 to DQ0	I/O	Two-way data bus with the SD-RAM
140	VSIOA3	—	Ground terminal (for I/O)
141	DCLK	O	Clock signal output to the SD-RAM
142	DCKE	O	Clock enable signal output to the SD-RAM
143	XWE	O	Write enable signal output to the SD-RAM
144	XCAS	O	Column address strobe signal output to the SD-RAM
145	XRAS	O	Row address strobe signal output to the SD-RAM
146	VDIO	—	Power supply terminal (+3.3V) (for I/O)
147	TESTO	O	Output terminal for the test
148, 149	A11, A10	O	Address signal output to the SD-RAM
150	VSC	—	Ground terminal (for core)
151, 152	A9, A8	O	Address signal output to the SD-RAM
153	VDC	—	Power supply terminal (+2.5V) (for core)
154 to 157	A7 to A4	O	Address signal output to the SD-RAM
158	VSIO	—	Ground terminal (for I/O)
159 to 162	A3 to A0	O	Address signal output to the SD-RAM
163	VDIO	—	Power supply terminal (+3.3V) (for I/O)
164	XSRQ	O	Stream data bus request signal output to the DSP
165	XSHD	I	Stream data bus header flag signal input from the DSP
166	SDCK	I	Stream data bus clock signal input from the DSP
167	XSAK	I	Stream data bus acknowledge signal input from the DSP
168	SDEF	I	Stream data bus error flag signal input from the DSP
169 to 176	SD0 to SD7	I	Stream data signal input from the DSP

• **PANEL-L BOARD IC1003 μPD70F3259YGF-S05-JBT-A (INTERFACE CONTROLLER)**

Pin No.	Pin Name	I/O	Description
1, 2	KEY1, KEY0	I	Front panel key input terminal (A/D input)
3	AVDD	—	Power supply terminal (+3.3V)
4	AVSS	—	Ground terminal
5, 6	NC	—	Not used
7	AVREF	I	Reference voltage (+3.3V) input terminal
8	JOG A	I	Jog dial pulse input from the rotary encoder (DISC AMS, PUSH ENTER) (A phase input)
9	JOG B	I	Jog dial pulse input from the rotary encoder (DISC AMS, PUSH ENTER) (B phase input)
10	FLMD0	—	Flash write terminal
11	VDD	—	Power supply terminal (+3.3V)
12	REGC	—	Connected to the capacitor for the regulator
13	VSS	—	Ground terminal
14	X1	I	Main system clock input terminal (5 MHz)
15	X2	O	Main system clock output terminal (5 MHz)
16	RESET	I	System reset signal input from the reset signal generator "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
17	X1	I	Sub system clock input terminal Not used
18	X2	O	Sub system clock output terminal Not used
19	NC	—	Not used
20	KEY_INT	I	Wake up signal input terminal for front panel key
21	232C_INT	I	Wake up signal input terminal for RS-232C Not used
22	DBUGRST	—	Not used
23	SYSCONCS	I	Chip select signal input from the system controller
24	SYSCONSIN	I	Serial data input from the system controller
25	SYSCONSOUT	O	Serial data output to the system controller
26	SYSCONSCLK	I	Serial clock signal input from the system controller
27	232COUT	O	Serial data output to the RS-232C Not used
28	232CIN	I	Serial data input from the RS-232C Not used
29, 30	NC	—	Not used
31	SIRCS	I	Remote control signal input terminal
32	CONTROL_S	O	S-LINK and CONTROL S output terminal Not used
33	SYSCONBUSY	O	Interrupt signal output to the system controller
34	SYSCONRST	O	Reset signal output to the system controller, DSP, AV decoder, audio DSP, mechanism controller and DSD decoder "L": reset
35	EVSS	—	Ground terminal
36	EVDD	—	Power supply terminal (+3.3V)
37 to 54	NC	—	Not used
55	VIDEO_OFF	O	Video power supply on/off control signal output terminal Not used
56	FLDSDATA	O	Serial data output to the fluorescent indicator tube driver
57	FLDSCLK	O	Serial clock signal output to the fluorescent indicator tube driver
58	KBCIN	I	Serial clock signal input from the KEYBOARD
59	KBDIN	I	Serial data input from the KEYBOARD
60	SIRCS-WAKE	I	Wake up signal input terminal for SIRCS
61	FLDRST	O	Reset signal output to the fluorescent indicator tube driver "L": reset
62	FLDCS	O	Chip select signal output to the fluorescent indicator tube driver
63	FLHS	—	Flash write terminal

Pin No.	Pin Name	I/O	Description
64	CLKOUT	O	Clock signal output terminal Not used
65	NC	—	Not used
66	KBCOUT	O	Serial clock signal input stop signal output to the KEYBOARD
67	KBDOUT	O	Serial data input stop signal output to the KEYBOARD
68	AMUTE	O	Audio muting control signal output terminal
69	VMUTE	O	Video muting control signal output to the video amplifier
70	P_CONT	O	Power supply on/off control signal output terminal "H": power on
71	BVSS	—	Ground terminal
72	BVDD	—	Power supply terminal (+3.3V)
73	LED0	O	LED drive signal output of the PROGRESSIVE indicator "H": LED on
74	LED1	O	LED drive signal output of the SACD indicator "H": LED on
75	LED2	O	LED drive signal output of the MULTI CHANNEL indicator "H": LED on
76	LED3	O	LED drive signal output of the FL OFF indicator "H": LED on
77	LED4	O	LED drive signal output terminal Not used
78	FLMD1	—	Flash write terminal
79, 80	NC	—	Not used
81	FL_CTRL	O	FLMOD (pin ⑧⓪) control signal output terminal at the flash write
82 to 88	NC	—	Not used
89	LED4	O	LED drive signal output of the DISC CHANGE indicator "H": LED on
90	LED6	O	LED drive signal output of the DIRECT SEARCH indicator "H": LED on
91, 92	NC	—	Not used
93	SIRCS_MODE	I	COMMAND MODE switch input terminal
94	NO_USE	—	Not used
95	PON_CHECK	I	Power supply voltage input terminal
96	MODEL_SEL	I	Model selection signal input terminal
97	SELF_CHECK	I	Self-diagnosis mode selection signal input terminal
98 to 100	KEY4 to KEY2	I	Front panel key input terminal (A/D input)

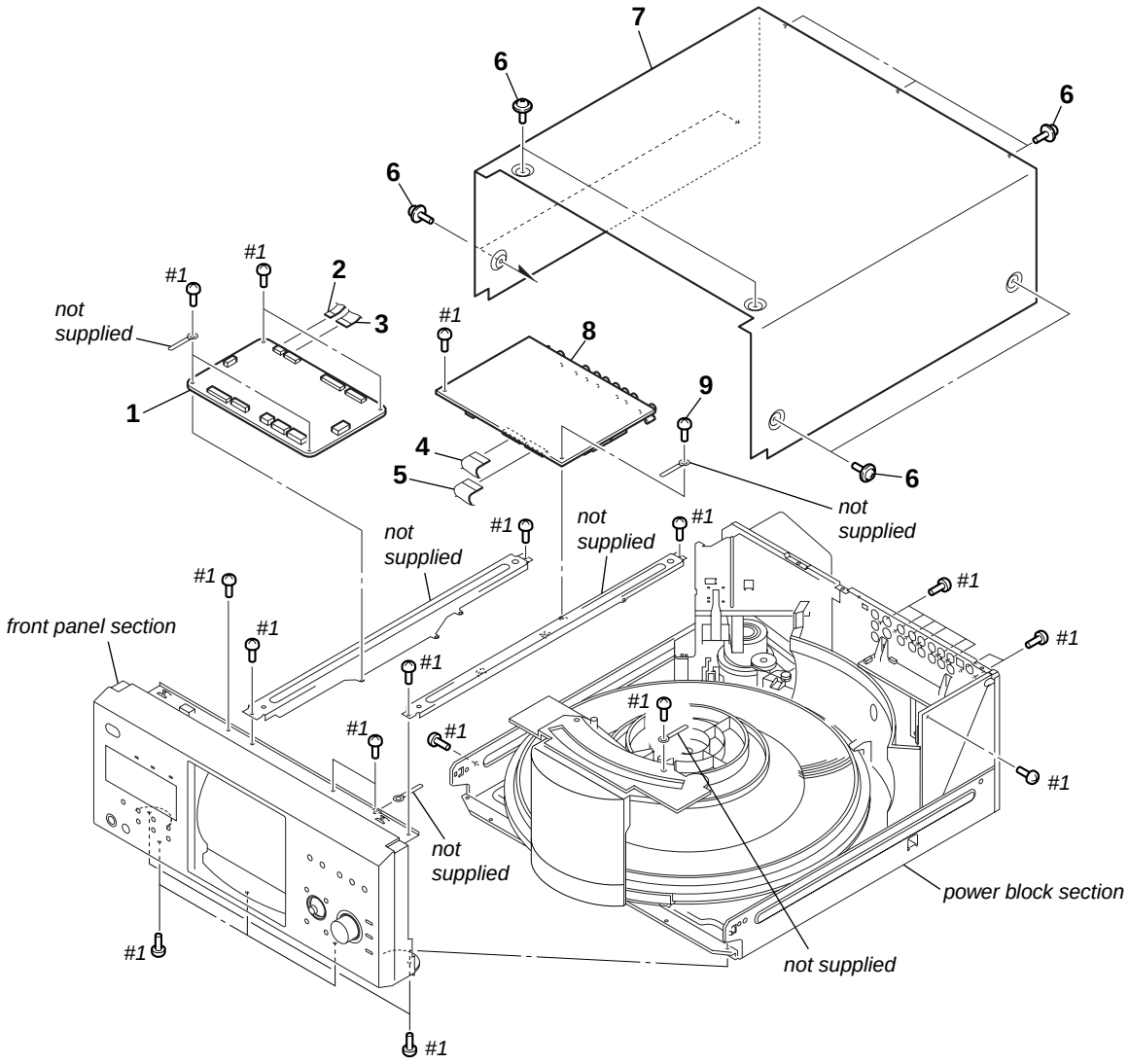
SECTION 8
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories are given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

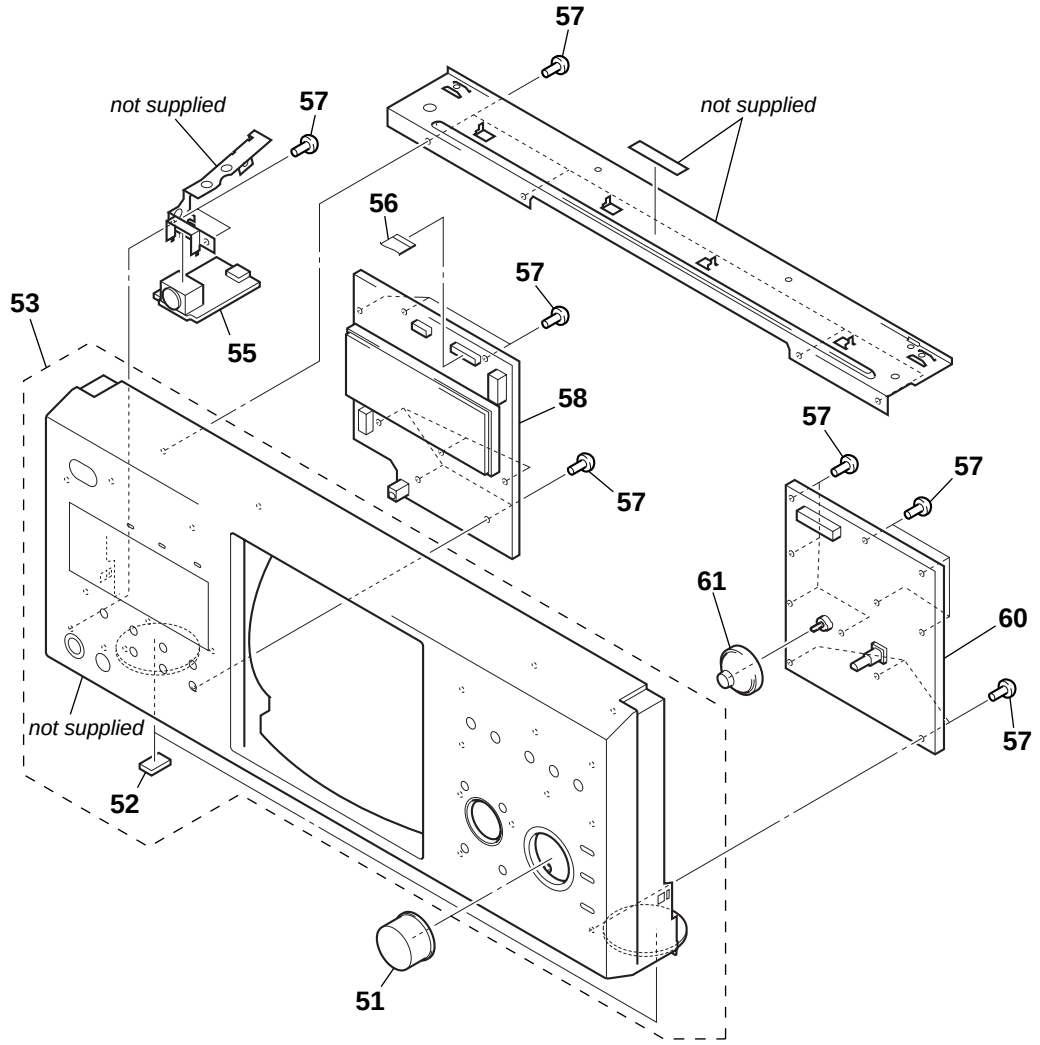
Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

8-1. OVERALL SECTION



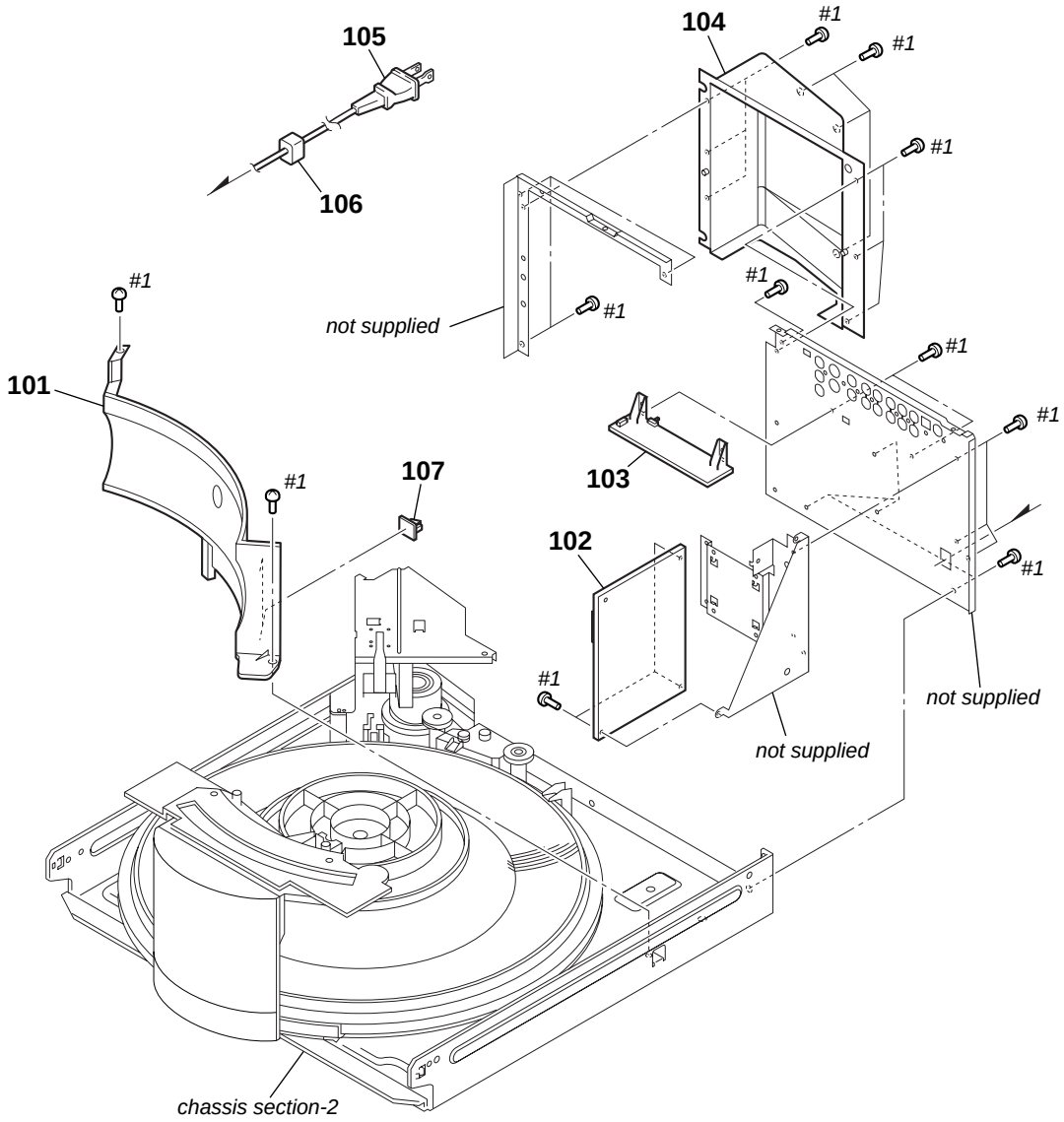
Ref. No.	Part No.	Description	Remark
1	A-4733-734-A	MB BOARD, COMPLETE	
2	1-827-575-11	WIRE (FLAT TYPE) (9 CORE)	
3	1-827-583-11	WIRE (FLAT TYPE) (26 CORE)	
4	1-827-585-11	WIRE (FLAT TYPE) (23 CORE)	
5	1-827-584-11	WIRE (FLAT TYPE) (27 CORE)	
6	4-210-291-01	SCREW (CASE 3 TP2)	
7	4-246-970-11	CASE	
8	A-4733-724-A	AV BOARD, COMPLETE	
9	3-970-608-31	SUMITITE (B3), +BV	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

8-2. FRONT PANEL SECTION



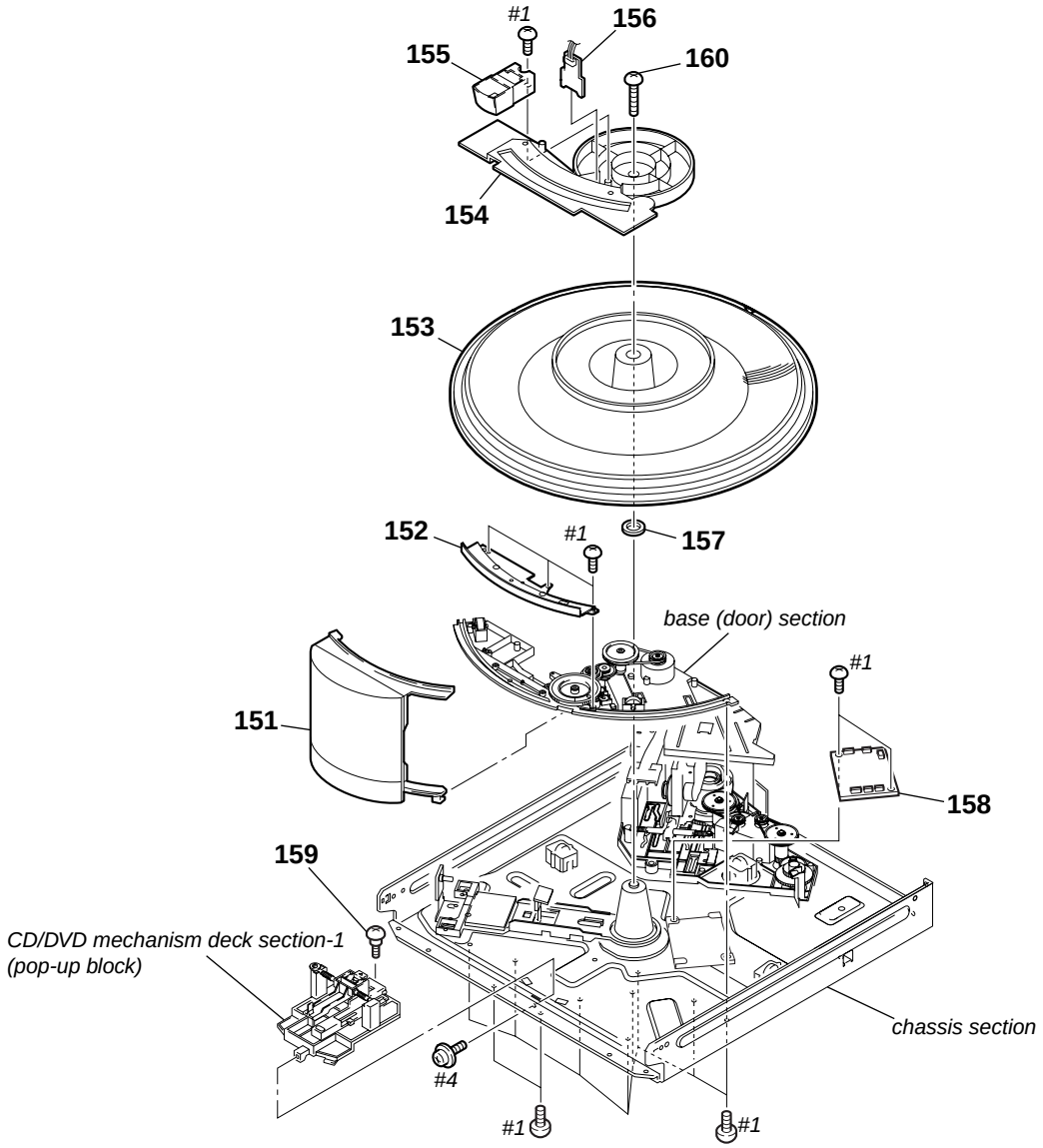
Ref. No.	Part No.	Description	Remark
51	4-246-979-01	KNOB (AMS)	
52	4-977-358-01	CUSHION	
53	X-4955-638-1	PANEL ASSY, FRONT	
55	1-688-454-11	KEY BOARD	
56	1-827-576-11	WIRE (FLAT TYPE) (19 CORE)	
57	4-951-620-01	SCREW (2.6X8), +BVTP	
58	A-4733-726-A	PANEL-L BOARD, COMPLETE	
60	A-4733-713-A	PANEL-R BOARD, COMPLETE	
61	4-246-980-02	KNOB (CURSOR)	

8-3. POWER BLOCK SECTION



Ref. No.	Part No.	Description	Remark
101	4-226-841-02	COVER (PT)	
102	1-477-958-11	POWER BLOCK (Including POWER BOARD)	
103	A-4733-728-A	RS-232C BOARD, COMPLETE	
104	4-226-876-21	COVER (CDM)	
⚠105	1-783-531-32	CORD, POWER	
* 106	3-703-244-00	BUSHING (2104), CORD	
107	4-250-786-01	LOCKING WIRE SADDLE	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

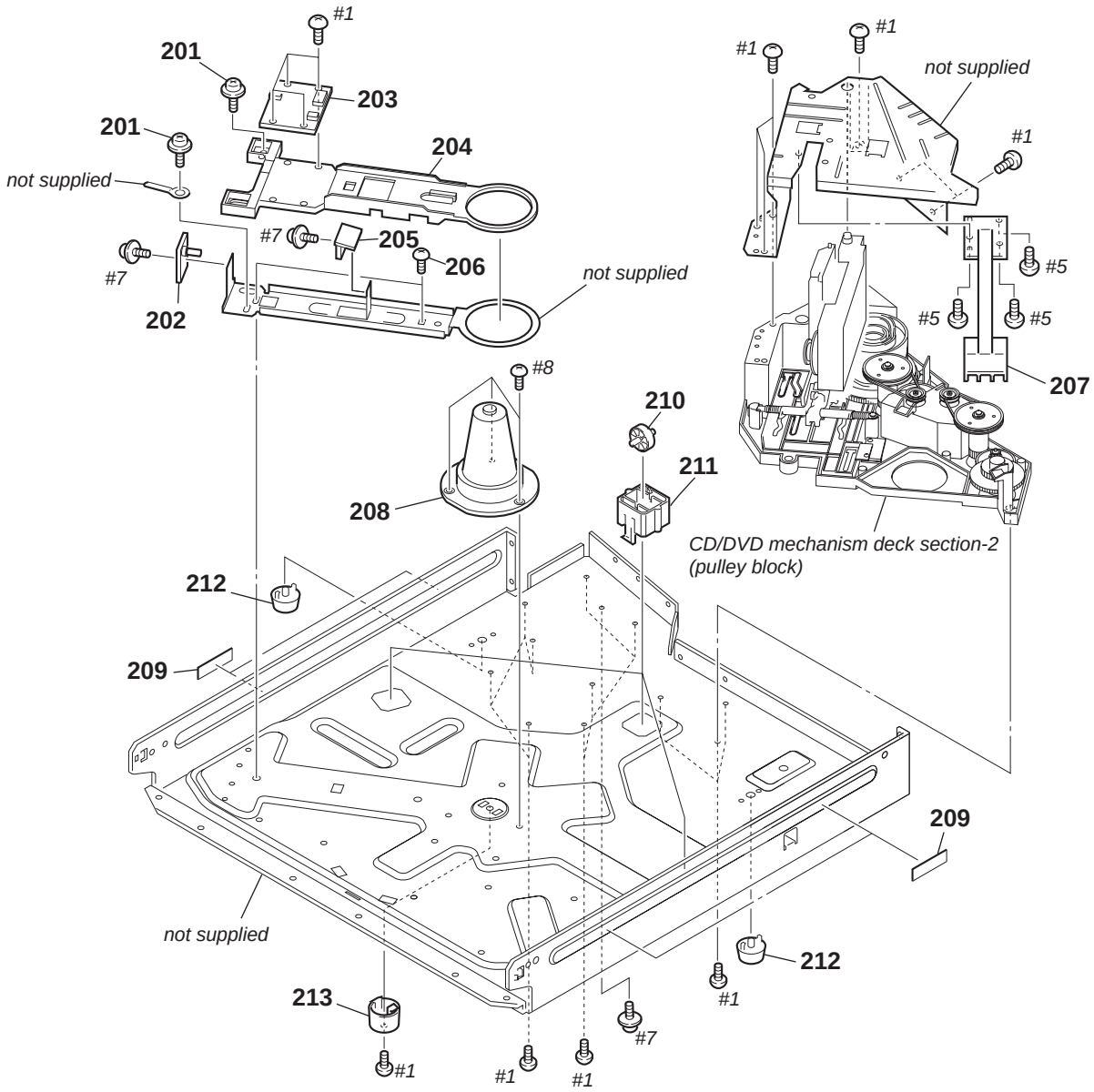
8-4. TABLE SECTION



Ref. No.	Part No.	Description	Remark
151	X-4955-637-1	DOOR ASSY	
152	4-226-834-01	COVER (TABLE)	
153	X-4952-500-2	TABLE (400) ASSY	
154	4-226-833-05	GUIDE (DOOR)	
155	4-215-968-01	WINDOW (INTERNAL ILLUMINATION)	
156	A-4733-717-A	LED BOARD, COMPLETE	

Ref. No.	Part No.	Description	Remark
157	3-701-447-21	WASHER, 10	
158	A-4733-730-A	DRIVER BOARD, COMPLETE	
159	3-356-601-11	SCREW, STEP	
160	3-703-136-01	SCREW (M3X14)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#4	7-685-903-11	SCREW +PTPWH 3X6 (TYPE2)	

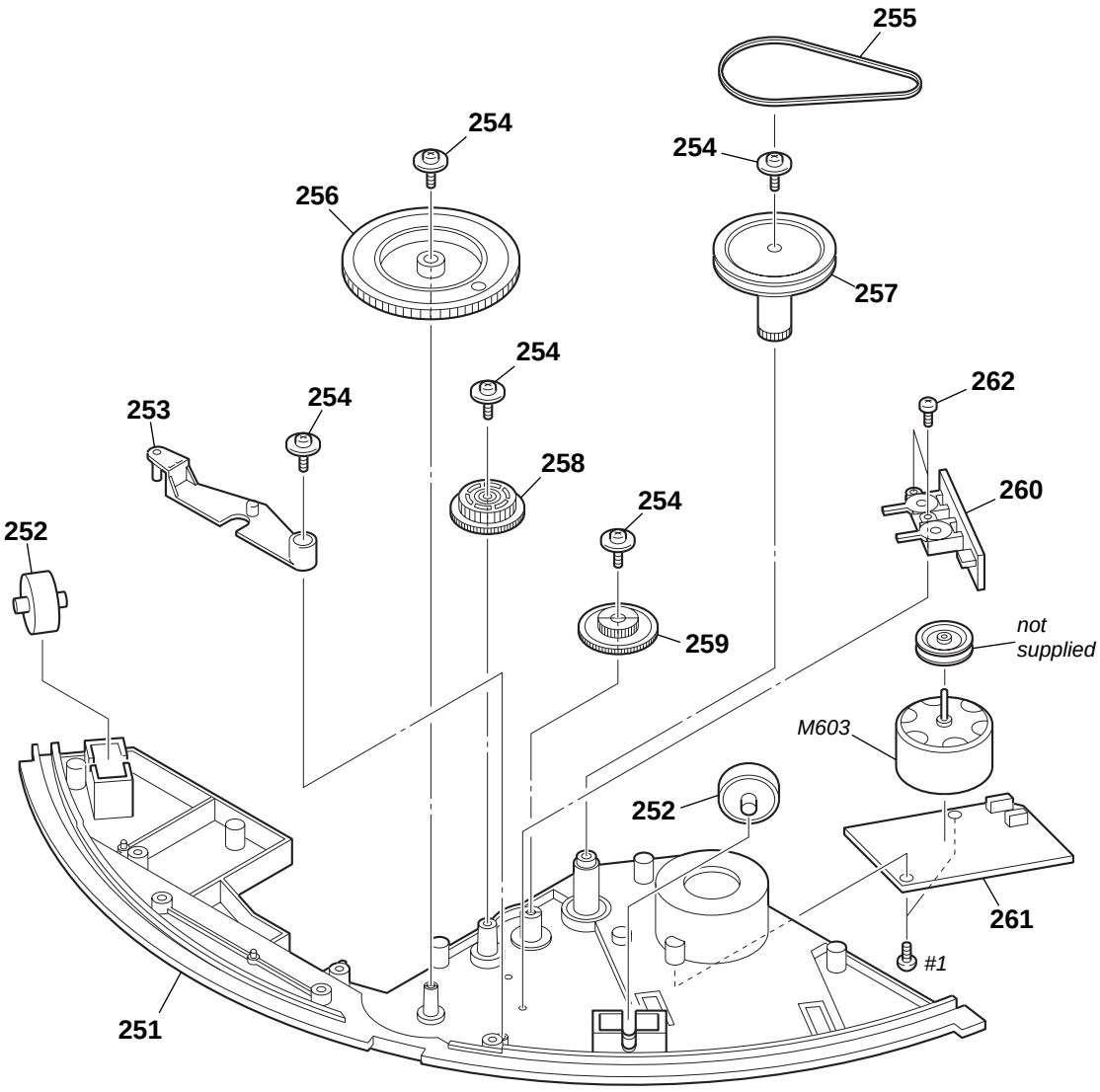
8-5. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
201	3-703-249-01	SCREW, S TIGHT, +PTTWH 3X6	
202	1-688-453-11	D. SENS OUT BOARD	
203	A-4733-732-A	SENSOR BOARD, COMPLETE	
204	4-225-873-01	HOLDER (TABLE SENSOR 400)	
205	1-688-452-11	D. SENS IN BOARD	
206	4-216-096-01	SCREW (T1), STEP	
207	4-216-088-02	GUIDE (DISC)	
208	4-216-089-02	SHAFT (CENTER)	
* 209	3-378-400-01	CUSHION, SARANET	

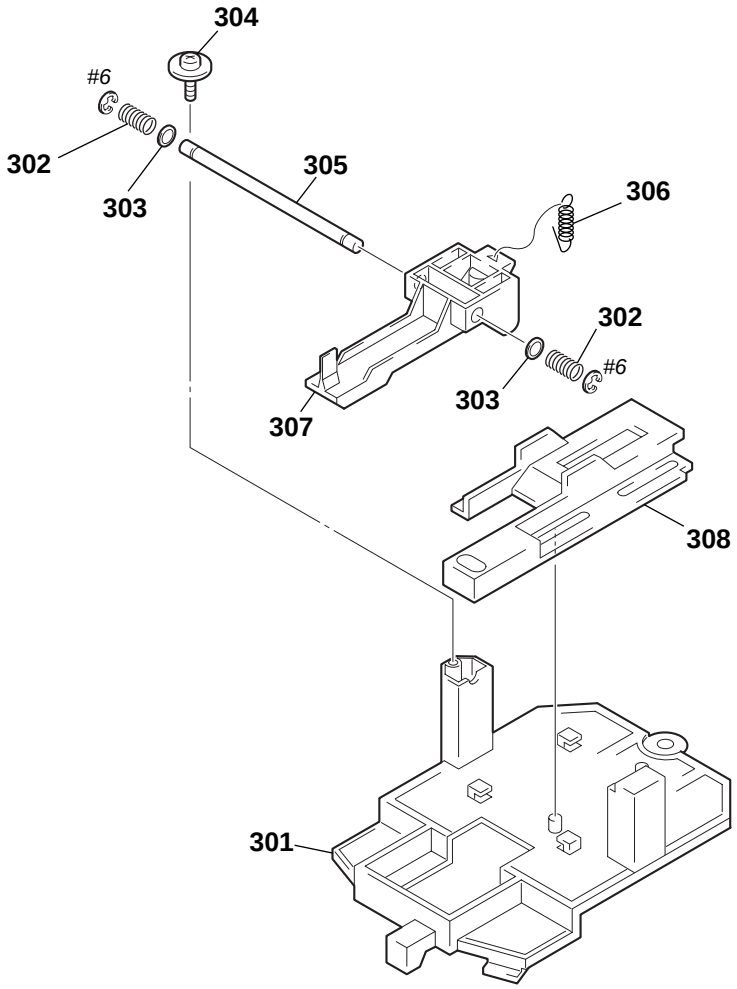
Ref. No.	Part No.	Description	Remark
210	4-216-093-01	ROLLER	
211	4-216-092-03	HOLDER (ROLLER)	
212	4-965-822-01	FOOT	
213	4-931-169-01	FOOT	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#5	7-685-645-79	SCREW +BVTP 3X6 TYPE2 N-S	
#7	7-682-948-01	SCREW +PSW 3X8	
#8	7-685-871-01	SCREW +BVTT 3X6 (S)	

8-6. BASE (DOOR) SECTION



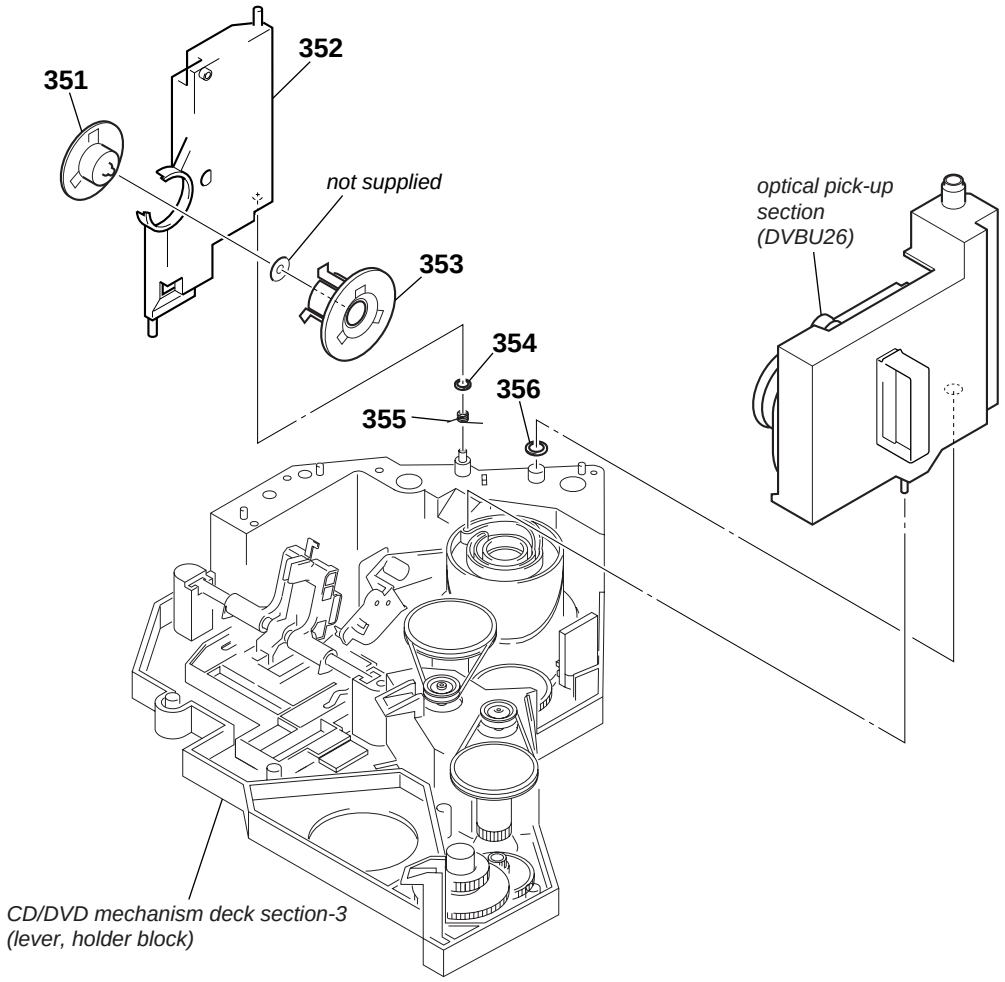
Ref. No.	Part No.	Description	Remark
251	4-226-827-02	BASE (DOOR DRIVING)	
252	4-216-093-01	ROLLER	
253	4-226-832-01	LEVER (PU JOINT)	
254	4-933-134-11	SCREW (+PTPWH M2.6X8)	
255	4-219-326-01	BELT (DIA. 42X1.2)	
256	4-226-828-02	GEAR (CAM)	
257	4-226-829-01	GEAR (PULLEY)	
258	4-226-831-01	GEAR (B)	
259	4-226-830-01	GEAR (A)	
260	1-688-450-11	DOOR SW BOARD	
261	1-688-451-11	DOOR MOTOR BOARD	
262	4-951-620-01	SCREW (2.6X8), +BVTP	
M603	1-541-632-12	MOTOR, DC (DOOR)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	

8-7. CD/DVD MECHANISM DECK SECTION-1 (POP-UP BLOCK)



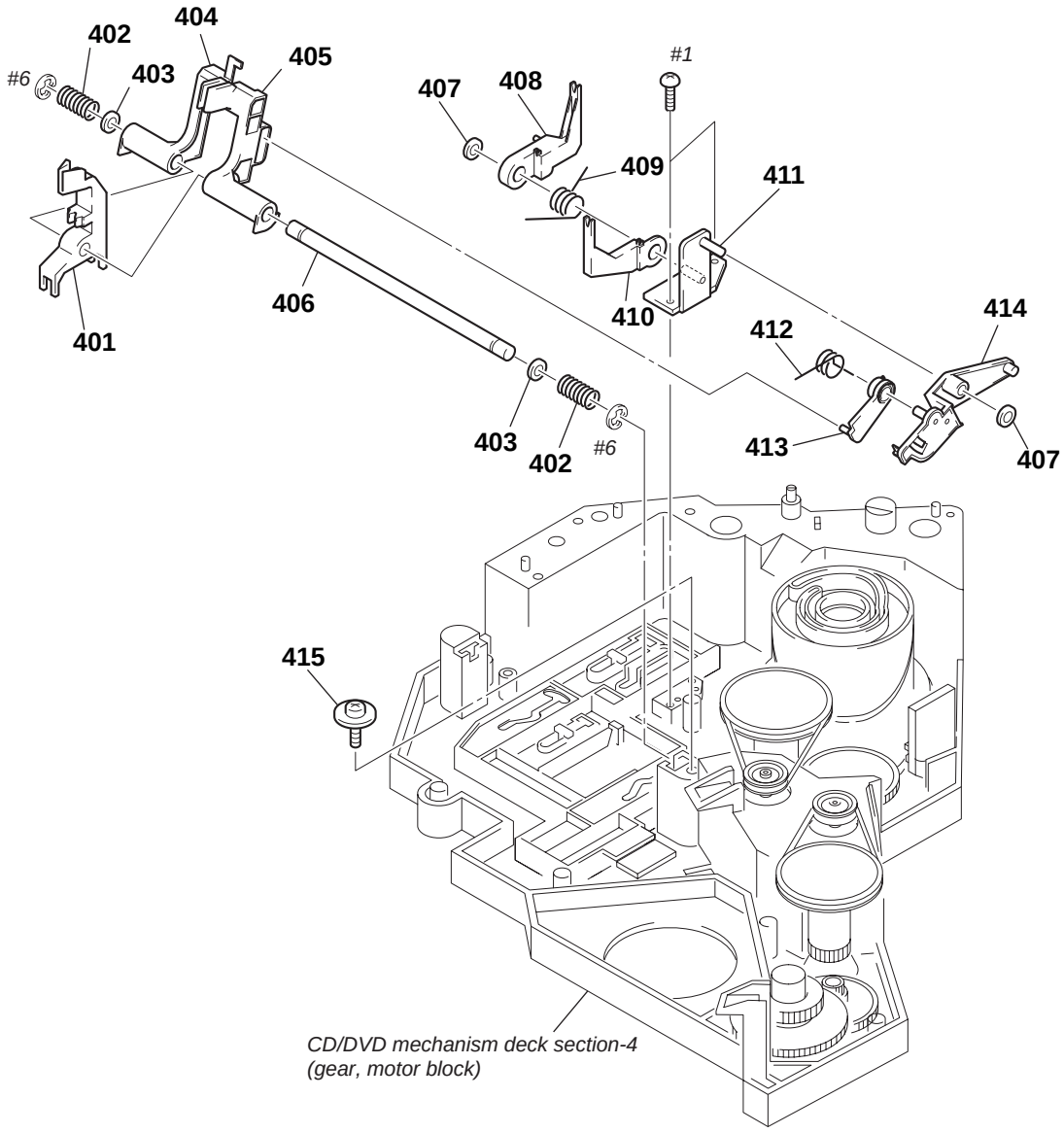
Ref. No.	Part No.	Description	Remark
301	4-216-100-02	HOLDER (POP-UP)	
302	4-216-103-01	SPRING (POP-UP), COMPRESSION	
303	3-701-441-21	WASHER	
304	4-998-716-01	SCREW, BU FITTING	
305	4-216-102-01	SHAFT (POP-UP FULCRUM)	
306	4-216-104-01	SPRING (POP-UP), TENSION	
307	4-228-352-01	LEVER (POP-UP 400)	
308	4-216-099-02	SLIDER (POP-UP)	
#6	7-624-106-04	STOP RING 3.0, TYPE -E	

8-8. CD/DVD MECHANISM DECK SECTION-2 (PULLEY BLOCK)



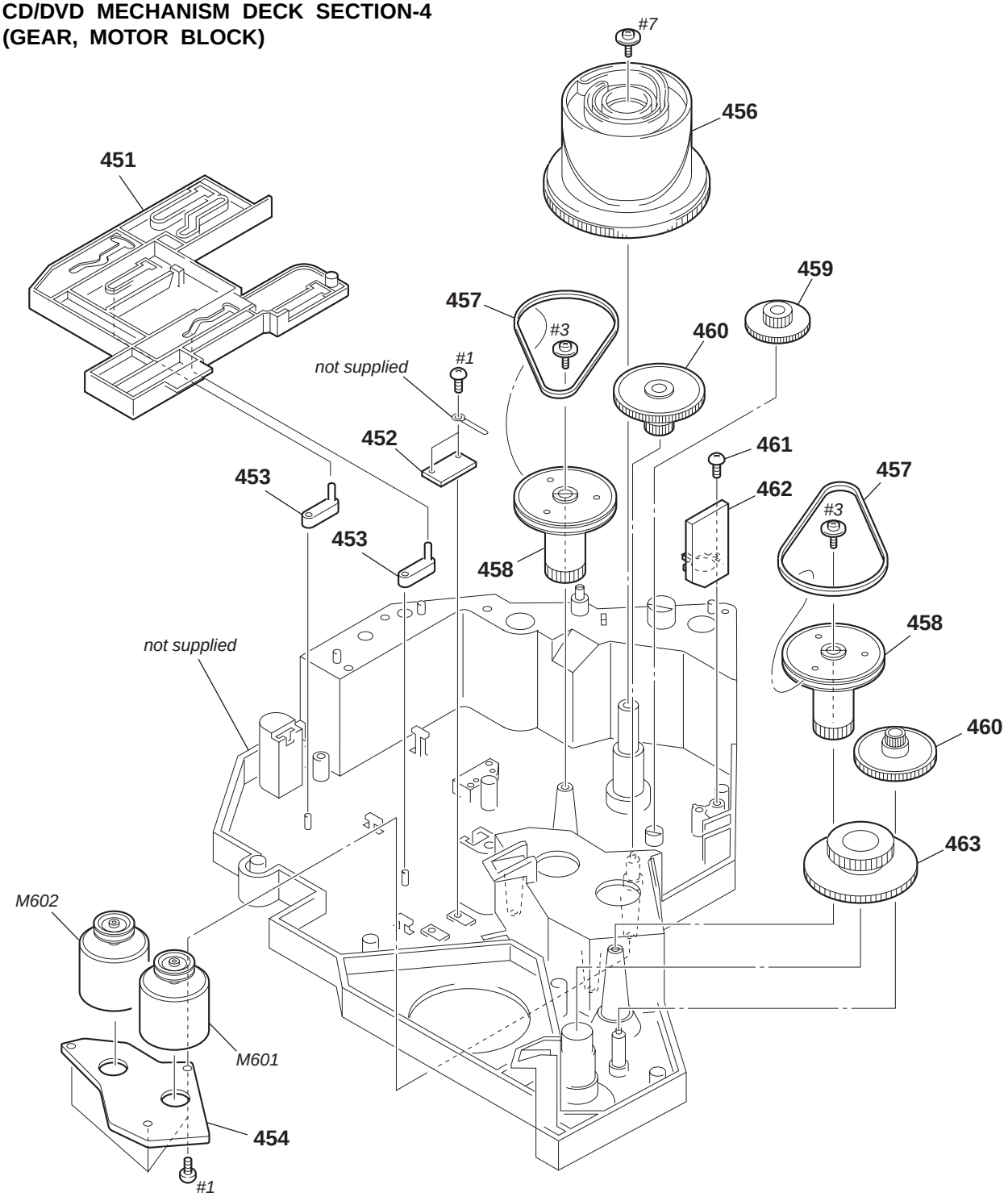
Ref. No.	Part No.	Description	Remark
351	4-245-983-01	PULLEY (A)	
352	4-216-082-11	HOLDER (MAGNET), TORSION	
353	4-245-984-01	PULLEY (B)	
354	3-701-441-21	WASHER	
355	4-216-081-01	SPRING (MG), TORSION	
356	3-701-446-21	WASHER, 8	

8-9. CD/DVD MECHANISM DECK SECTION-3 (LEVER, HOLDER BLOCK)



Ref. No.	Part No.	Description	Remark
401	X-4952-499-1	LEVER (LOCK 400) ASSY	
402	4-216-067-01	SPRING (CLAMP), COMPRESSION	
403	3-701-441-21	WASHER	
404	X-4952-501-1	HOLDER (DISC L400) ASSY	
405	X-4952-502-1	HOLDER (DISC R400) ASSY	
406	4-225-868-01	SHAFT (CLAMP 400)	
407	3-325-697-21	WASHER	
408	4-216-076-11	HOLDER (R)	
409	4-216-077-01	SPRING (HOLDER FR), TORSION	
410	4-225-871-03	HOLDER (F400)	
411	X-4950-900-1	BRACKET (LEVER) ASSY	
412	4-216-080-01	SPRING (LIMITTER), TORSION	
413	4-216-079-02	LIMITTER (LEVER)	
414	4-216-078-01	LEVER (LOADING)	
415	4-998-716-01	SCREW, BU FITTING	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#6	7-624-106-04	STOP RING 3.0, TYPE -E	

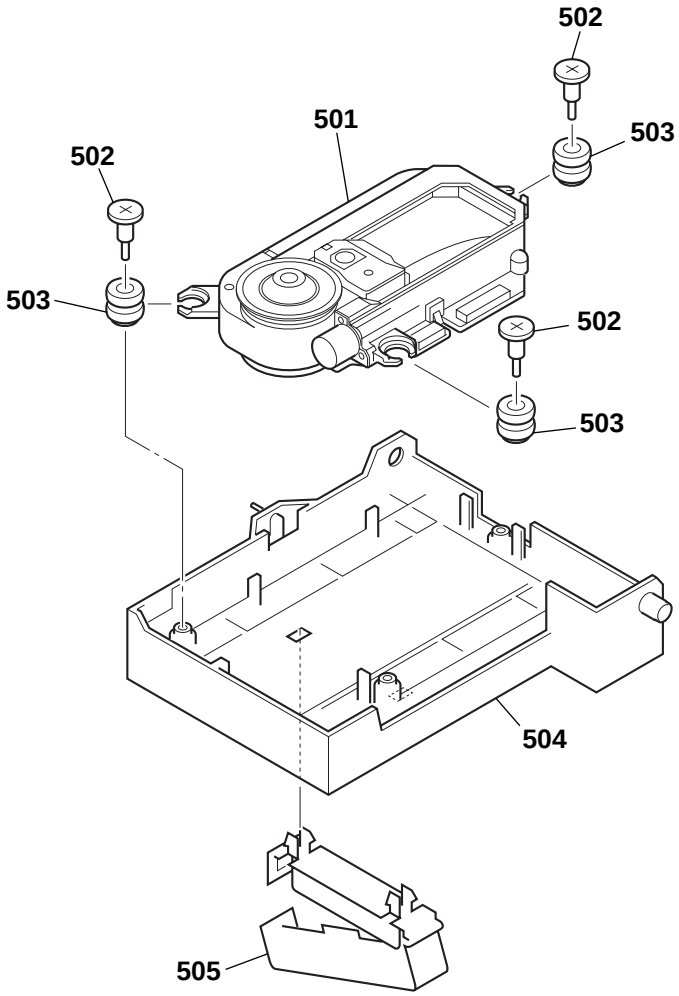
8-10. CD/DVD MECHANISM DECK SECTION-4 (GEAR, MOTOR BLOCK)



Ref. No.	Part No.	Description	Remark
451	4-225-865-01	SLIDER (400)	
452	1-688-448-11	LOCK SW BOARD	
453	X-4952-503-1	LEVER (FULCRUM 400) ASSY	
454	1-688-447-11	LAODING MOTOR BOARD	
456	A-4672-676-B	CAM ASSY	
457	4-225-876-01	BELT (400)	
458	4-225-870-01	PULLEY (400)	
459	4-216-057-01	GEAR (CENTER 2)	
460	4-216-058-01	GEAR (CENTER)	

Ref. No.	Part No.	Description	Remark
461	4-951-620-01	SCREW (2.6X8), +BVTP	
462	1-688-446-11	LOADING SW BOARD	
463	4-225-869-01	GEAR (TABLE 400)	
M601	A-4672-895-A	MOTOR (400) ASSY (TABLE)	
M602	A-4672-895-A	MOTOR (400) ASSY (LOADING)	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#3	7-685-648-79	SCREW +BVTP 3X12 TYPE2 IT-3	
#7	7-682-948-01	SCREW +PSW 3X8	

8-11. OPTICAL PICK-UP SECTION (DVBU26)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
⚠501	A-6061-908-A	OPTICAL PICK-UP KHM-290AAA (SERVICE ASSY)	
502	4-981-923-01	SCREW (M), STEP	
503	3-053-847-11	INSULATOR	
504	X-4955-513-1	HOLDER (BU) ASSY	
505	3-074-747-01	CLAMP (FFC)	

SECTION 9
ELECTRICAL PARTS LIST

AV

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
	A-4733-724-A	AV BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C102	1-126-204-11	ELECT CHIP	47uF	20%	16V
C103	1-126-204-11	ELECT CHIP	47uF	20%	16V
C104	1-126-204-11	ELECT CHIP	47uF	20%	16V
C105	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C106	1-126-204-11	ELECT CHIP	47uF	20%	16V
C107	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C108	1-126-204-11	ELECT CHIP	47uF	20%	16V
C109	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C201	1-126-947-11	ELECT	47uF	20%	25V
C202	1-126-947-11	ELECT	47uF	20%	25V
C203	1-126-924-11	ELECT	330uF	20%	6.3V
C204	1-126-767-11	ELECT	1000uF	20%	16V
C205	1-126-193-11	ELECT CHIP	1uF	20%	50V
C206	1-126-193-11	ELECT CHIP	1uF	20%	50V
C207	1-126-947-11	ELECT	47uF	20%	25V
C208	1-126-947-11	ELECT	47uF	20%	25V
C209	1-126-193-11	ELECT CHIP	1uF	20%	50V
C210	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C211	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C212	1-127-694-11	ELECT	47uF	20%	25V
C213	1-130-478-00	MYLAR	0.0039uF	5%	50V
C214	1-130-478-00	MYLAR	0.0039uF	5%	50V
C215	1-130-478-00	MYLAR	0.0039uF	5%	50V
C216	1-130-478-00	MYLAR	0.0039uF	5%	50V
C217	1-130-478-00	MYLAR	0.0039uF	5%	50V
C218	1-130-478-00	MYLAR	0.0039uF	5%	50V
C219	1-130-478-00	MYLAR	0.0039uF	5%	50V
C220	1-117-793-11	MYLAR	330PF	5%	50V
C221	1-117-793-11	MYLAR	330PF	5%	50V
C222	1-130-467-00	MYLAR	470PF	5%	50V
C223	1-117-793-11	MYLAR	330PF	5%	50V
C224	1-117-793-11	MYLAR	330PF	5%	50V
C225	1-117-793-11	MYLAR	330PF	5%	50V
C226	1-117-793-11	MYLAR	330PF	5%	50V
C227	1-117-793-11	MYLAR	330PF	5%	50V
C228	1-106-359-00	MYLAR	4700PF	5%	200V
C229	1-106-359-00	MYLAR	4700PF	5%	200V
C230	1-106-359-00	MYLAR	4700PF	5%	200V
C231	1-130-467-00	MYLAR	470PF	5%	50V
C232	1-106-359-00	MYLAR	4700PF	5%	200V
C233	1-117-793-11	MYLAR	330PF	5%	50V
C234	1-106-359-00	MYLAR	4700PF	5%	200V
C235	1-117-793-11	MYLAR	330PF	5%	50V
C236	1-106-359-00	MYLAR	4700PF	5%	200V
C237	1-117-793-11	MYLAR	330PF	5%	50V
C238	1-106-359-00	MYLAR	4700PF	5%	200V
C239	1-117-793-11	MYLAR	330PF	5%	50V
C240	1-117-793-11	MYLAR	330PF	5%	50V
C241	1-117-793-11	MYLAR	330PF	5%	50V
C242	1-117-793-11	MYLAR	330PF	5%	50V
C243	1-126-947-11	ELECT	47uF	20%	25V
C244	1-126-947-11	ELECT	47uF	20%	25V
C245	1-126-947-11	ELECT	47uF	20%	25V
C246	1-126-947-11	ELECT	47uF	20%	25V
C247	1-126-947-11	ELECT	47uF	20%	25V
C248	1-126-947-11	ELECT	47uF	20%	25V
C249	1-126-947-11	ELECT	47uF	20%	25V
C250	1-126-947-11	ELECT	47uF	20%	25V
C252	1-126-947-11	ELECT	47uF	20%	25V
C254	1-126-947-11	ELECT	47uF	20%	25V
C256	1-126-947-11	ELECT	47uF	20%	25V
C257	1-126-947-11	ELECT	47uF	20%	25V
C259	1-126-947-11	ELECT	47uF	20%	25V
C261	1-126-947-11	ELECT	47uF	20%	25V
C263	1-126-947-11	ELECT	47uF	20%	25V
C266	1-126-947-11	ELECT	47uF	20%	25V
C267	1-137-605-11	MYLAR	0.00022uF	5%	50V
C268	1-137-605-11	MYLAR	0.00022uF	5%	50V
C269	1-137-605-11	MYLAR	0.00022uF	5%	50V
C270	1-137-605-11	MYLAR	0.00022uF	5%	50V
C271	1-137-605-11	MYLAR	0.00022uF	5%	50V
C272	1-137-605-11	MYLAR	0.00022uF	5%	50V
C273	1-137-605-11	MYLAR	0.00022uF	5%	50V
C274	1-137-605-11	MYLAR	0.00022uF	5%	50V
C279	1-126-947-11	ELECT	47uF	20%	16V
C280	1-126-947-11	ELECT	47uF	20%	16V
C281	1-126-947-11	ELECT	47uF	20%	16V
C283	1-130-477-00	MYLAR	0.0033uF	5%	50V
C301	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C303	1-104-665-11	ELECT	100uF	20%	25V
C304	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C305	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

AV

Ref. No.	Part No.	Description			Remark
C306	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C307	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C309	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C310	1-104-665-11	ELECT	100uF	20%	25V
C313	1-119-800-11	ELECT	100uF	20%	10V
C316	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C319	1-104-665-11	ELECT	100uF	20%	25V
C320	1-104-665-11	ELECT	100uF	20%	25V
C323	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C324	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C334	1-104-665-11	ELECT	100uF	20%	25V
C335	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
		< CONNECTOR >			
CN201	1-573-806-21	PIN, CONNECTOR (1.5mm) (SMD) 6P			
CN202	1-784-834-21	CONNECTOR, FFC (LIF (NON-ZIF)) 23P			
CN203	1-784-835-21	CONNECTOR, FFC (LIF (NON-ZIF)) 27P			
CN205	1-815-954-21	PIN, CONNECTOR (PC BOARD) 13P			
CN206	1-764-177-11	PIN, CONNECTOR (SMD) (1.5mm) 7P			
CN207	1-794-509-11	PIN, CONNECTOR (PC BOARD) (3P)			
CN208	1-785-728-21	PIN (PC BOARD) , CONNECTOR 7P			
		< DIODE >			
D101	8-719-053-18	DIODE	1SR154-400TE-25		
D102	8-719-053-18	DIODE	1SR154-400TE-25		
D103	8-719-071-15	DIODE	HZM6.8ZWA1TL		
D104	8-719-071-15	DIODE	HZM6.8ZWA1TL		
D105	8-719-071-15	DIODE	HZM6.8ZWA1TL		
D106	8-719-071-15	DIODE	HZM6.8ZWA1TL		
D201	8-719-914-43	DIODE	DAN202K		
D202	8-719-988-61	DIODE	1SS355TE-17		
D307	8-719-914-44	DIODE	DAP202K		
		< EARTH TERMINAL >			
* G201	1-537-738-21	TERMINAL, EARTH			
* G301	1-537-738-21	TERMINAL, EARTH			
		< IC >			
IC101	8-759-662-86	IC	NJM79M05DL1A (TE2)		
IC102	6-701-820-01	IC	LA73053-TLM-E		
IC201	8-759-052-52	IC	L78M05T-FA		
IC202	8-759-100-96	IC	NJM4558M-TE2		
IC203	8-759-100-96	IC	NJM4558M-TE2		
IC204	8-759-100-96	IC	NJM4558M-TE2		
IC205	8-759-100-96	IC	NJM4558M-TE2		
IC206	6-600-011-01	IC	TOTX179L (DIGITAL OUT PCM/DTS/DOLBY DIGITAL OPTICAL)		
IC301	6-700-398-01	IC	uPC2918T-E1		
		< JACK >			
J101	1-694-484-21	TERMINAL, S (2P.V) (S VIDEO OUT)			
J102	1-815-361-11	JACK, PIN 3P (COMPONENT VIDEO OUT)			
J103	1-793-475-21	JACK, PIN 2P (LINE OUT VIDEO)			
J104	1-793-344-11	JACK, PIN 4P (LINE OUT AUDIO)			
J201	1-794-793-11	JACK, PIN 4P (5.1CH OUTPUT FRONT/REAR)			
J202	1-770-157-21	JACK, PIN 2P (5.1CH OUTPUT CENTER/WOOFER)			
J301	1-793-446-21	JACK, PIN 1P (DIGITAL OUT PCM/DTS/DOLBY DIGITAL COAXIAL)			
		< COIL >			
L101	1-412-060-11	INDUCTOR	22uH		
L102	1-412-060-11	INDUCTOR	22uH		
L201	1-419-387-21	INDUCTOR	100uH		
		< IC LINK >			
PS301	1-532-637-00	LINK, IC			
PS302	1-532-637-00	LINK, IC			
		< TRANSISTOR >			
Q104	8-729-421-19	TRANSISTOR	UN2213		
Q105	8-729-424-08	TRANSISTOR	UN2111		
Q201	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q202	8-729-230-49	TRANSISTOR	2SC2712-YG		
Q203	8-729-049-31	TRANSISTOR	2SB710A-RTX		
Q204	8-729-421-19	TRANSISTOR	UN2213		
Q205	8-729-421-19	TRANSISTOR	UN2213		
Q206	8-729-421-19	TRANSISTOR	UN2213		
Q207	8-729-027-53	TRANSISTOR	DTC124TKA-T146		
Q208	8-729-027-53	TRANSISTOR	DTC124TKA-T146		
Q209	8-729-027-53	TRANSISTOR	DTC124TKA-T146		
Q210	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q211	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q212	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
Q213	8-729-046-97	TRANSISTOR	2SD1938 (F) -T (TX).SO		
Q214	8-729-046-97	TRANSISTOR	2SD1938 (F) -T (TX).SO		
Q215	8-729-046-97	TRANSISTOR	2SD1938 (F) -T (TX).SO		
Q216	8-729-046-97	TRANSISTOR	2SD1938 (F) -T (TX).SO		
Q217	8-729-046-97	TRANSISTOR	2SD1938 (F) -T (TX).SO		
Q218	8-729-046-97	TRANSISTOR	2SD1938 (F) -T (TX).SO		
Q219	8-729-046-97	TRANSISTOR	2SD1938 (F) -T (TX).SO		
Q220	8-729-046-97	TRANSISTOR	2SD1938 (F) -T (TX).SO		
Q221	8-729-230-49	TRANSISTOR	2SC2712-YG		
Q301	6-550-543-01	TRANSISTOR	2SD1766FT100QR		
Q302	8-729-424-08	TRANSISTOR	UN2111		
Q308	8-729-230-49	TRANSISTOR	2SC2712-YG		
Q310	8-729-424-02	TRANSISTOR	2SB709A-QRS-TX		
		< RESISTOR >			
R100	1-216-833-11	METAL CHIP	10K	5%	1/10W
R101	1-216-864-11	SHORT CHIP	0		
R103	1-216-864-11	SHORT CHIP	0		
R104	1-216-864-11	SHORT CHIP	0		
R108	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R110	1-216-833-11	METAL CHIP	10K	5%	1/10W
R111	1-216-021-00	METAL CHIP	68	5%	1/10W
R112	1-216-021-00	METAL CHIP	68	5%	1/10W
R113	1-216-021-00	METAL CHIP	68	5%	1/10W
R114	1-216-021-00	METAL CHIP	68	5%	1/10W
R115	1-216-021-00	METAL CHIP	68	5%	1/10W
R116	1-216-021-00	METAL CHIP	68	5%	1/10W
R117	1-216-021-00	METAL CHIP	68	5%	1/10W
R118	1-216-021-00	METAL CHIP	68	5%	1/10W
R119	1-216-021-00	METAL CHIP	68	5%	1/10W

Ref. No.	Part No.	Description			Remark
R129	1-216-821-11	METAL CHIP	1K	5%	1/10W
R130	1-216-821-11	METAL CHIP	1K	5%	1/10W
R131	1-216-821-11	METAL CHIP	1K	5%	1/10W
R132	1-216-864-11	SHORT CHIP	0		
R133	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R134	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R135	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R137	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R138	1-216-845-11	METAL CHIP	100K	5%	1/10W
R139	1-216-845-11	METAL CHIP	100K	5%	1/10W
R140	1-216-833-11	METAL CHIP	10K	5%	1/10W
R141	1-216-830-11	METAL CHIP	5.6K	5%	1/10W
R142	1-216-833-11	METAL CHIP	10K	5%	1/10W
R143	1-216-833-11	METAL CHIP	10K	5%	1/10W
R144	1-216-833-11	METAL CHIP	10K	5%	1/10W
R145	1-216-864-11	SHORT CHIP	0		
R146	1-216-864-11	SHORT CHIP	0		
R147	1-216-864-11	SHORT CHIP	0		
R148	1-216-841-11	METAL CHIP	47K	5%	1/10W
R149	1-216-833-11	METAL CHIP	10K	5%	1/10W
R150	1-216-841-11	METAL CHIP	47K	5%	1/10W
R151	1-216-833-11	METAL CHIP	10K	5%	1/10W
R152	1-216-841-11	METAL CHIP	47K	5%	1/10W
R153	1-216-833-11	METAL CHIP	10K	5%	1/10W
R155	1-216-833-11	METAL CHIP	10K	5%	1/10W
R156	1-216-833-11	METAL CHIP	10K	5%	1/10W
R157	1-216-833-11	METAL CHIP	10K	5%	1/10W
R160	1-208-785-11	METAL CHIP	1.3K	0.5%	1/10W
R161	1-208-785-11	METAL CHIP	1.3K	0.5%	1/10W
R162	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R163	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R164	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R165	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R166	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R167	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R168	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R169	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R170	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R171	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R172	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R173	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R174	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R175	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R176	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R177	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R178	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R179	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R180	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R181	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R182	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R183	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R184	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R185	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R186	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R187	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R188	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R189	1-208-782-11	METAL CHIP	1K	0.5%	1/10W
R190	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W

Ref. No.	Part No.	Description			Remark
R191	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R192	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R193	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R194	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R195	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R196	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R197	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R198	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R199	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R200	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R201	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R202	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R203	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R204	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R205	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R206	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R207	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R208	1-208-800-11	METAL CHIP	5.6K	0.5%	1/10W
R209	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R210	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R211	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R212	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R213	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R214	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R215	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R216	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R217	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R218	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R219	1-208-790-11	METAL CHIP	2.2K	0.5%	1/10W
R220	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R221	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R222	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R223	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R224	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R225	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R226	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R227	1-208-822-11	METAL CHIP	47K	0.5%	1/10W
R228	1-208-774-11	METAL CHIP	470	0.5%	1/10W
R229	1-208-774-11	METAL CHIP	470	0.5%	1/10W
R230	1-208-774-11	METAL CHIP	470	0.5%	1/10W
R231	1-208-774-11	METAL CHIP	470	0.5%	1/10W
R232	1-208-774-11	METAL CHIP	470	0.5%	1/10W
R233	1-208-774-11	METAL CHIP	470	0.5%	1/10W
R234	1-208-774-11	METAL CHIP	470	0.5%	1/10W
R235	1-208-774-11	METAL CHIP	470	0.5%	1/10W
R236	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R237	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R238	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R239	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R240	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R241	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R242	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R243	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R244	1-216-845-11	METAL CHIP	100K	5%	1/10W
R245	1-216-845-11	METAL CHIP	100K	5%	1/10W
R246	1-216-845-11	METAL CHIP	100K	5%	1/10W
R247	1-208-758-11	METAL CHIP	100	0.5%	1/10W

AV | **D.SENS IN** | **D.SENS OUT** | **DOOR MOTOR** | **DOOR SW** | **DRIVER**

Ref. No.	Part No.	Description			Remark
R248	1-208-758-11	METAL CHIP	100	0.5%	1/10W
R249	1-208-758-11	METAL CHIP	100	0.5%	1/10W
R250	1-208-758-11	METAL CHIP	100	0.5%	1/10W
R251	1-208-758-11	METAL CHIP	100	0.5%	1/10W
R252	1-208-758-11	METAL CHIP	100	0.5%	1/10W
R253	1-208-758-11	METAL CHIP	100	0.5%	1/10W
R254	1-208-758-11	METAL CHIP	100	0.5%	1/10W
R255	1-208-758-11	METAL CHIP	100	0.5%	1/10W
R256	1-208-758-11	METAL CHIP	100	0.5%	1/10W
R257	1-216-821-11	METAL CHIP	1K	5%	1/10W
R258	1-216-821-11	METAL CHIP	1K	5%	1/10W
R259	1-216-821-11	METAL CHIP	1K	5%	1/10W
R260	1-216-033-00	METAL CHIP	220	5%	1/10W
R261	1-216-021-00	METAL CHIP	68	5%	1/10W
R262	1-216-833-11	METAL CHIP	10K	5%	1/10W
R264	1-216-833-11	METAL CHIP	10K	5%	1/10W
R265	1-208-794-11	METAL CHIP	3.3K	0.5%	1/10W
R266	1-208-794-11	METAL CHIP	3.3K	0.5%	1/10W
R267	1-208-794-11	METAL CHIP	3.3K	0.5%	1/10W
R268	1-216-864-11	SHORT CHIP	0		
R280	1-216-821-11	METAL CHIP	1K	5%	1/10W
R281	1-216-833-11	METAL CHIP	10K	5%	1/10W
R284	1-216-839-11	METAL CHIP	33K	5%	1/10W
R287	1-216-841-11	METAL CHIP	47K	5%	1/10W
R290	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R293	1-208-788-11	METAL CHIP	1.8K	0.5%	1/10W
R294	1-208-788-11	METAL CHIP	1.8K	0.5%	1/10W
R296	1-216-864-11	SHORT CHIP	0		
		< SWITCH >			
S101	1-692-989-11	SWITCH, SLIDE (SCAN SELECT)			
**********					
	1-688-452-11	D.SENS IN BOARD			
		**********			
*	4-985-300-01	HOLDER (P-T)			
		< PHOTO TRANSISTOR >			
Q81	8-729-921-53	PHOTO TRANSISTOR PT483F1			
**********					
	1-688-453-11	D.SENS OUT BOARD			
		**********			
*	4-976-473-01	HOLDER (LED-S)			
		< LED >			
D81	8-719-055-84	LED GL528VS1 (DISC DTETCT SENSOR)			
**********					
	1-688-451-11	DOOR MOTOR BOARD			
		**********			
**********					

Ref. No.	Part No.	Description			Remark
	1-688-450-11	DOOR SW BOARD			
		**********			
		< SWITCH >			
S611	1-786-154-11	SWITCH, ROTARY (DOOR)			
S612	1-786-154-11	SWITCH, ROTARY (POP)			
**********					
	A-4733-730-A	DRIVER BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C901	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C902	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C903	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C904	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C905	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C906	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C907	1-109-953-11	ELECT	2.2uF	20%	50V
C908	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C909	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C910	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C911	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C913	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C914	1-126-947-11	ELECT	47uF	20%	25V
C915	1-126-947-11	ELECT	47uF	20%	25V
		< CONNECTOR >			
CN901	1-573-806-21	PIN, CONNECTOR (1.5mm) (SMD) 6P			
* CN902	1-691-591-11	PIN, CONNECTOR (1.5mm) (SMD) 8P			
CN903	1-778-063-11	PIN, CONNECTOR (PC BOARD) 4P			
CN904	1-770-215-11	PIN, CONNECTOR (PC BOARD) 7P			
CN905	1-778-063-41	PIN, CONNECTOR (PC BOARD) 4P			
CN906	1-794-509-11	PIN, CONNECTOR (PC BOARD) (3P)			
		< DIODE >			
D935	8-719-025-49	DIODE 02CZ15-TE85L			
		< EARTH TERMINAL >			
* G901	1-537-738-21	TERMINAL, EARTH			
		< IC >			
IC941	8-759-822-38	IC LA6510			
IC961	8-759-822-38	IC LA6510			
		< TRANSISTOR >			
Q931	8-729-230-49	TRANSISTOR	2SC2712-YG		
Q941	8-729-424-18	TRANSISTOR	UN2113		
Q942	8-729-421-19	TRANSISTOR	UN2213		
Q951	8-729-424-18	TRANSISTOR	UN2113		
Q952	8-729-421-19	TRANSISTOR	UN2213		
		< RESISTOR >			
R901	1-216-797-11	METAL CHIP	10	5%	1/10W
R902	1-240-915-11	RES, CHIP	1	1%	1/10W
R903	1-240-915-11	RES, CHIP	1	1%	1/10W
R904	1-216-797-11	METAL CHIP	10	5%	1/10W
R905	1-240-915-11	RES, CHIP	1	1%	1/10W

DRIVER **KEY** **LED** **LOADING MOTOR** **LOADING SW** **LOCK SW** **MB**

Ref. No.	Part No.	Description			Remark
R906	1-216-835-11	METAL CHIP	15K	5%	1/10W
R907	1-240-915-11	RES, CHIP	1	1%	1/10W
R908	1-216-835-11	METAL CHIP	15K	5%	1/10W
R909	1-216-848-11	METAL CHIP	180K	5%	1/10W
R910	1-218-291-11	METAL CHIP	16K	5%	1/10W
R911	1-216-847-11	METAL CHIP	150K	5%	1/10W
R912	1-216-847-11	METAL CHIP	150K	5%	1/10W
R913	1-216-848-11	METAL CHIP	180K	5%	1/10W
R914	1-216-848-11	METAL CHIP	180K	5%	1/10W
R915	1-218-291-11	METAL CHIP	16K	5%	1/10W
R916	1-216-849-11	METAL CHIP	220K	5%	1/10W
R917	1-216-845-11	METAL CHIP	100K	5%	1/10W
R918	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R919	1-240-915-11	RES, CHIP	1	1%	1/10W
R920	1-240-915-11	RES, CHIP	1	1%	1/10W
R921	1-216-847-11	METAL CHIP	150K	5%	1/10W
R922	1-216-845-11	METAL CHIP	100K	5%	1/10W
R923	1-216-821-11	METAL CHIP	1K	5%	1/10W
R924	1-216-809-11	METAL CHIP	100	5%	1/10W
R925	1-216-821-11	METAL CHIP	1K	5%	1/10W
R926	1-216-845-11	METAL CHIP	100K	5%	1/10W
R927	1-216-847-11	METAL CHIP	150K	5%	1/10W
R928	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R929	1-240-915-11	RES, CHIP	1	1%	1/10W
R930	1-240-915-11	RES, CHIP	1	1%	1/10W
R931	1-216-845-11	METAL CHIP	100K	5%	1/10W
R932	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R933	1-216-809-11	METAL CHIP	100	5%	1/10W
R934	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R935	1-216-809-11	METAL CHIP	100	5%	1/10W
R936	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R937	1-216-057-00	METAL CHIP	2.2K	5%	1/10W

****

1-688-454-11 KEY BOARD
****

< CAPACITOR >

C821	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C822	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C823	1-126-935-11	ELECT	470uF	20%	10V

< CONNECTOR >

* CNP503	1-568-942-11	PIN, CONNECTOR 4P	
J821	1-785-945-11	CONNECTOR, DIN (KEYBOARD)	

< COIL >

L821	1-424-122-11	FILTER, NOISE	
L822	1-424-122-11	FILTER, NOISE	
L823	1-424-122-11	FILTER, NOISE	
L824	1-424-122-11	FILTER, NOISE	

****

A-4733-717-A LED BOARD, COMPLETE
****

< CAPACITOR >

C801	1-164-156-11	CERAMIC CHIP	0.1uF		25V

< CONNECTOR >

CNP504	1-785-328-11	PIN, CONNECTOR (LIGHT ANGRE) 2P			

< LED >

D801	6-500-329-01	LED SELU5E23C-PTP15 (ILLUMINATION)			

< RESISTOR >

R801	1-216-805-11	METAL CHIP	47	5%	1/10W

****

1-688-447-11 LOADING MOTOR BOARD
****

****

1-688-446-11 LOADING SW BOARD
****

< SWITCH >

S621	1-786-154-11	SWITCH, ROTARY (LOADING)			

****

1-688-448-11 LOCK SW BOARD
****

< SWITCH >

S622	1-771-604-11	SWITCH, DETECTION (LOCK)			

****

A-4733-734-A MB BOARD, COMPLETE
****

< CAPACITOR >

C101	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C102	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C103	1-126-209-11	ELECT CHIP	100uF	20%	4V
C104	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C105	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C106	1-162-914-11	CERAMIC CHIP	9PF	0.5PF	50V
C107	1-162-914-11	CERAMIC CHIP	9PF	0.5PF	50V
C108	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C109	1-126-209-11	ELECT CHIP	100uF	20%	4V
C111	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C113	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C115	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C118	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C120	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C121	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C122	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C124	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C125	1-126-607-11	ELECT CHIP	47uF	20%	4V
C126	1-126-204-11	ELECT CHIP	47uF	20%	16V
C127	1-126-246-11	ELECT CHIP	220uF	20%	4V
C128	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C129	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C130	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C132	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C201	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

MB

Ref. No.	Part No.	Description			Remark
C202	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C210	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C211	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C212	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C213	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C214	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C215	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C216	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C218	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C219	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C220	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C221	1-124-779-00	ELECT CHIP	10uF	20%	16V
C225	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C226	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C228	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C229	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C230	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C232	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C233	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C234	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C235	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C236	1-164-230-11	CERAMIC CHIP	220PF	5%	50V
C238	1-124-779-00	ELECT CHIP	10uF	20%	16V
C240	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C241	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C242	1-126-205-11	ELECT CHIP	47uF	20%	6.3V
C243	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C244	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C245	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C246	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C247	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C248	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C249	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C251	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C252	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C253	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C254	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C255	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C256	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C257	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C258	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C259	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C260	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C261	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C262	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C263	1-124-779-00	ELECT CHIP	10uF	20%	16V
C264	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C265	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C266	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C270	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C271	1-126-204-11	ELECT CHIP	47uF	20%	16V
C272	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C302	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C303	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C304	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C305	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C308	1-126-206-11	ELECT CHIP	100uF	20%	6.3V

Ref. No.	Part No.	Description			Remark
C309	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C310	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C311	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C312	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C313	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C314	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C315	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C316	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C317	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C318	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C319	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C320	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C321	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C322	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C323	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C324	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C325	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C326	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C327	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C328	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C329	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C330	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C331	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C332	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C333	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C334	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C335	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C337	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C338	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C339	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C340	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C343	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C344	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C401	1-126-193-11	ELECT CHIP	1uF	20%	50V
C404	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C405	1-124-779-00	ELECT CHIP	10uF	20%	16V
C407	1-124-779-00	ELECT CHIP	10uF	20%	16V
C408	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C410	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C411	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C413	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C414	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C416	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C417	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C418	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C419	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C420	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C423	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C424	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C426	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C427	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C429	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C430	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C431	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C432	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C433	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C436	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C437	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

Ref. No.	Part No.	Description			Remark
C438	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C439	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C440	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C441	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C442	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C443	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C448	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C450	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C501	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C502	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C503	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C504	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C505	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C508	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C509	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C510	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C511	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C512	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C513	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C514	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C515	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C516	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C517	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C518	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C519	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C520	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C521	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C522	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C523	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C525	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C528	1-125-891-11	CERAMIC CHIP	0.47uF	10%	10V
C532	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C535	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C543	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C601	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C602	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C603	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C605	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C606	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C607	1-126-209-11	ELECT CHIP	100uF	20%	4V
C608	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C609	1-126-607-11	ELECT CHIP	47uF	20%	4V
C610	1-126-607-11	ELECT CHIP	47uF	20%	4V
C611	1-126-607-11	ELECT CHIP	47uF	20%	4V
C612	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C613	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C614	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C615	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C616	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C617	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C618	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C619	1-126-607-11	ELECT CHIP	47uF	20%	4V
C620	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C621	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C622	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C623	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C624	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C625	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C626	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C627	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C628	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C629	1-164-315-11	CERAMIC CHIP	470PF	5%	50V
C630	1-164-173-11	CERAMIC CHIP	0.0039uF	10%	50V
C631	1-127-956-21	FILM CHIP	0.1uF	5%	16V
C632	1-127-956-21	FILM CHIP	0.1uF	5%	16V
C633	1-164-733-11	CERAMIC CHIP	820PF	10%	50V
C634	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C635	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C636	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C637	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C638	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C639	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C640	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C701	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C702	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C705	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C707	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C709	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C710	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C711	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C712	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C713	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C714	1-126-607-11	ELECT CHIP	47uF	20%	4V
C901	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C902	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C903	1-124-779-00	ELECT CHIP	10uF	20%	16V
C904	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C905	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C909	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C910	1-126-209-11	ELECT CHIP	100uF	20%	4V
C912	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C913	1-126-209-11	ELECT CHIP	100uF	20%	4V
C914	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C915	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C916	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C917	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C919	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C920	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C921	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C922	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C923	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C924	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C926	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C927	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C928	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C929	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C930	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C931	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C932	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C933	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C934	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C935	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C936	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

MB

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
CN101	1-785-728-21	PIN (PC BOARD) , CONNECTOR 7P	
CN102	1-784-871-21	CONNECTOR, FFC (LIF (NON-ZIF)) 19P	
* CN103	1-580-789-21	PIN, CONNECTOR (SMD) 6P	
* CN104	1-770-470-21	PIN, CONNECTOR (PC BOARD) 6P	
* CN105	1-760-388-11	CONNECTOR PIN (SMD) 9P	
* CN106	1-691-551-11	PIN, CONNECTOR (SMD) 8P	
CN107	1-766-382-21	PIN, CONNECTOR (1.5mm) (SMD) 10P	
CN203	1-573-366-21	CONNECTOR, FFC/FPC 26P	
CN204	1-817-201-21	CONNECTOR, FFC/FPC 9P	
CN501	1-784-835-21	CONNECTOR, FFC (LIF (NON-ZIF)) 27P	
CN601	1-784-834-21	CONNECTOR, FFC (LIF (NON-ZIF)) 23P	
CN701	1-691-550-11	PIN, CONNECTOR (1.5mm) (SMD) 3P	
		< DIODE >	
D101	8-719-049-09	DIODE 1SS367-T3SONY	
D501	8-719-914-44	DIODE DAP202K	
D502	8-719-914-44	DIODE DAP202K	
D503	8-719-914-44	DIODE DAP202K	
		< FERRITE BEAD/SHORT >	
FB104	1-469-324-21	FERRITE 0uH	
FB105	1-469-324-21	FERRITE 0uH	
FB106	1-469-324-21	FERRITE 0uH	
FB107	1-469-324-21	FERRITE 0uH	
FB108	1-469-324-21	FERRITE 0uH	
FB109	1-469-324-21	FERRITE 0uH	
FB110	1-469-324-21	FERRITE 0uH	
FB111	1-469-324-21	FERRITE 0uH	
FB112	1-469-784-11	FERRITE 0uH	
FB121	1-216-864-11	SHORT CHIP 0	
FB122	1-216-864-11	SHORT CHIP 0	
FB123	1-500-284-21	FERRITE 0uH	
FB124	1-216-864-11	SHORT CHIP 0	
FB125	1-500-283-11	FERRITE 0uH	
FB126	1-500-283-11	FERRITE 0uH	
FB127	1-500-284-21	FERRITE 0uH	
FB401	1-216-864-11	SHORT CHIP 0	
FB501	1-469-784-11	FERRITE 0uH	
FB502	1-469-784-11	FERRITE 0uH	
FB601	1-216-864-11	SHORT CHIP 0	
		< FILTER >	
FL102	1-234-177-21	FILTER, CHIP EMI	
FL103	1-234-177-21	FILTER, CHIP EMI	
FL104	1-234-177-21	FILTER, CHIP EMI	
FL105	1-234-177-21	FILTER, CHIP EMI	
FL106	1-234-177-21	FILTER, CHIP EMI	
FL107	1-233-893-21	FILTER, CHIP EMI	
FL108	1-234-177-21	FILTER, CHIP EMI	
FL109	1-234-177-21	FILTER, CHIP EMI	
FL201	1-234-177-21	FILTER, CHIP EMI	
FL402	1-234-177-21	FILTER, CHIP EMI	
FL403	1-234-177-21	FILTER, CHIP EMI	
FL404	1-234-177-21	FILTER, CHIP EMI	
FL501	1-234-177-21	FILTER, CHIP EMI	
FL502	1-234-177-21	FILTER, CHIP EMI	
FL701	1-234-177-21	FILTER, CHIP EMI	
FL901	1-234-177-21	FILTER, CHIP EMI	
FL902	1-234-177-21	FILTER, CHIP EMI	
FL903	1-234-177-21	FILTER, CHIP EMI	
FL905	1-234-177-21	FILTER, CHIP EMI	
		< IC >	
IC101	8-759-640-40	IC BR24C04F-WE2	
IC102	6-702-302-01	IC TK11133CSCL-G	
IC103	6-701-877-01	IC SM8707EV-G-E2	
IC104	6-701-837-01	IC MB91307RPFV-G-BND-E1	
IC106	6-803-478-01	IC MBM29DL324BE90TN-E11573	
IC108	6-701-874-01	IC IDT71V016SA15PH8 (SCD2994)	
IC201	6-703-445-01	IC SP3726A	
IC202	6-701-878-01	IC FAN8034L	
IC301	6-701-876-01	IC CXD9703R	
IC302	6-702-302-01	IC TK11133CSCL-G	
IC303	6-702-020-01	IC MSM51V18160F-60T47M1	
IC401	6-702-300-01	IC TK11118CSCL-G	
IC403	8-752-416-45	IC CXD1935Q	
IC404	6-703-842-01	IC GLT5160L16P-7TCT	
IC405	6-703-842-01	IC GLT5160L16P-7TCT	
IC501	8-752-418-21	IC CXD1938AR	
IC502	6-704-222-01	IC AK4358VQ-L	
IC601	6-702-301-01	IC TK11125CSCL-G	
IC602	6-701-814-01	IC CXD9698R	
IC603	6-703-842-01	IC GLT5160L16P-7TCT	
IC604	6-701-079-01	IC ADV7300AKST	
IC605	6-702-301-01	IC TK11125CSCL-G	
IC701	6-702-287-01	IC CXD9705R	
IC702	6-702-439-01	IC K9F6408U0C-TCB0T	
IC703	8-759-548-99	IC SN74LV08APWR	
IC901	6-704-261-01	IC TK11225CMCL-G	
IC903	6-703-842-01	IC GLT5160L16P-7TCT	
IC905	8-752-416-77	IC CXD2753R	
IC906	6-702-231-01	IC LMH6642MFX/NOPB	
		< COIL >	
L101	1-414-410-21	INDUCTOR CHIP 10uH	
L201	1-412-031-11	INDUCTOR CHIP 47uH	
L202	1-412-031-11	INDUCTOR CHIP 47uH	
		< TRANSISTOR >	
Q001	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q002	8-729-027-38	TRANSISTOR DTA144EKA-T146	
Q201	8-729-903-46	TRANSISTOR 2SB1132-P	
Q202	8-729-903-46	TRANSISTOR 2SB1132-P	
Q701	8-729-900-53	TRANSISTOR DTC114EK	
		< RESISTOR >	
R021	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R022	1-216-864-11	SHORT CHIP 0	
R101	1-216-827-11	METAL CHIP 3.3K 5% 1/10W	
R102	1-216-833-11	METAL CHIP 10K 5% 1/10W	
R103	1-216-864-11	SHORT CHIP 0	
R105	1-216-864-11	SHORT CHIP 0	
R106	1-216-821-11	METAL CHIP 1K 5% 1/10W	
R107	1-216-837-11	METAL CHIP 22K 5% 1/10W	
R108	1-216-864-11	SHORT CHIP 0	

Ref. No.	Part No.	Description			Remark
R109	1-216-805-11	METAL CHIP	47	5%	1/10W
R110	1-216-805-11	METAL CHIP	47	5%	1/10W
R111	1-216-821-11	METAL CHIP	1K	5%	1/10W
R112	1-216-845-11	METAL CHIP	100K	5%	1/10W
R113	1-216-845-11	METAL CHIP	100K	5%	1/10W
R114	1-216-821-11	METAL CHIP	1K	5%	1/10W
R115	1-216-821-11	METAL CHIP	1K	5%	1/10W
R117	1-216-833-11	METAL CHIP	10K	5%	1/10W
R118	1-216-833-11	METAL CHIP	10K	5%	1/10W
R119	1-216-813-11	METAL CHIP	220	5%	1/10W
R120	1-216-797-11	METAL CHIP	10	5%	1/10W
R121	1-216-805-11	METAL CHIP	47	5%	1/10W
R122	1-216-809-11	METAL CHIP	100	5%	1/10W
R123	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R124	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R125	1-216-833-11	METAL CHIP	10K	5%	1/10W
R126	1-216-833-11	METAL CHIP	10K	5%	1/10W
R129	1-216-797-11	METAL CHIP	10	5%	1/10W
R133	1-216-833-11	METAL CHIP	10K	5%	1/10W
R138	1-216-809-11	METAL CHIP	100	5%	1/10W
R139	1-216-833-11	METAL CHIP	10K	5%	1/10W
R141	1-216-797-11	METAL CHIP	10	5%	1/10W
R142	1-216-797-11	METAL CHIP	10	5%	1/10W
R144	1-216-797-11	METAL CHIP	10	5%	1/10W
R146	1-216-797-11	METAL CHIP	10	5%	1/10W
R147	1-216-805-11	METAL CHIP	47	5%	1/10W
R148	1-216-809-11	METAL CHIP	100	5%	1/10W
R150	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R151	1-216-809-11	METAL CHIP	100	5%	1/10W
R152	1-216-833-11	METAL CHIP	10K	5%	1/10W
R153	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R154	1-216-809-11	METAL CHIP	100	5%	1/10W
R157	1-216-809-11	METAL CHIP	100	5%	1/10W
R159	1-216-833-11	METAL CHIP	10K	5%	1/10W
R160	1-216-809-11	METAL CHIP	100	5%	1/10W
R163	1-216-809-11	METAL CHIP	100	5%	1/10W
R165	1-216-833-11	METAL CHIP	10K	5%	1/10W
R167	1-216-809-11	METAL CHIP	100	5%	1/10W
R168	1-216-864-11	SHORT CHIP	0		
R170	1-414-226-21	FERRITE	0uH		
R171	1-216-833-11	METAL CHIP	10K	5%	1/10W
R172	1-216-821-11	METAL CHIP	1K	5%	1/10W
R173	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R175	1-216-864-11	SHORT CHIP	0		
R176	1-216-809-11	METAL CHIP	100	5%	1/10W
R177	1-216-809-11	METAL CHIP	100	5%	1/10W
R178	1-216-809-11	METAL CHIP	100	5%	1/10W
R179	1-216-809-11	METAL CHIP	100	5%	1/10W
R180	1-216-809-11	METAL CHIP	100	5%	1/10W
R181	1-216-801-11	METAL CHIP	22	5%	1/10W
R182	1-216-801-11	METAL CHIP	22	5%	1/10W
R183	1-216-809-11	METAL CHIP	100	5%	1/10W
R184	1-216-864-11	SHORT CHIP	0		
R185	1-216-864-11	SHORT CHIP	0		
R187	1-216-809-11	METAL CHIP	100	5%	1/10W
R188	1-216-809-11	METAL CHIP	100	5%	1/10W
R189	1-216-809-11	METAL CHIP	100	5%	1/10W
R190	1-216-809-11	METAL CHIP	100	5%	1/10W
R191	1-216-805-11	METAL CHIP	47	5%	1/10W
R192	1-216-864-11	SHORT CHIP	0		
R193	1-216-809-11	METAL CHIP	100	5%	1/10W
R194	1-216-864-11	SHORT CHIP	0		
R195	1-216-809-11	METAL CHIP	100	5%	1/10W
R196	1-216-809-11	METAL CHIP	100	5%	1/10W
R197	1-216-809-11	METAL CHIP	100	5%	1/10W
R198	1-216-809-11	METAL CHIP	100	5%	1/10W
R199	1-216-809-11	METAL CHIP	100	5%	1/10W
R206	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R210	1-216-815-11	METAL CHIP	330	5%	1/10W
R211	1-216-809-11	METAL CHIP	100	5%	1/10W
R212	1-216-809-11	METAL CHIP	100	5%	1/10W
R218	1-216-846-11	METAL CHIP	120K	5%	1/10W
R219	1-216-846-11	METAL CHIP	120K	5%	1/10W
R220	1-216-847-11	METAL CHIP	150K	5%	1/10W
R221	1-216-847-11	METAL CHIP	150K	5%	1/10W
R222	1-216-842-11	METAL CHIP	56K	5%	1/10W
R223	1-216-842-11	METAL CHIP	56K	5%	1/10W
R224	1-216-850-11	METAL CHIP	270K	5%	1/10W
R225	1-216-833-11	METAL CHIP	10K	5%	1/10W
R226	1-216-853-11	METAL CHIP	470K	5%	1/10W
R227	1-216-846-11	METAL CHIP	120K	5%	1/10W
R229	1-216-833-11	METAL CHIP	10K	5%	1/10W
R230	1-216-839-11	METAL CHIP	33K	5%	1/10W
R231	1-216-855-11	METAL CHIP	680K	5%	1/10W
R232	1-216-839-11	METAL CHIP	33K	5%	1/10W
R233	1-216-853-11	METAL CHIP	470K	5%	1/10W
R234	1-211-981-11	METAL CHIP	33	0.5%	1/10W
R235	1-216-809-11	METAL CHIP	100	5%	1/10W
R236	1-211-981-11	METAL CHIP	33	0.5%	1/10W
R238	1-216-839-11	METAL CHIP	33K	5%	1/10W
R239	1-216-839-11	METAL CHIP	33K	5%	1/10W
R240	1-216-839-11	METAL CHIP	33K	5%	1/10W
R241	1-216-839-11	METAL CHIP	33K	5%	1/10W
R242	1-216-849-11	METAL CHIP	220K	5%	1/10W
R243	1-216-853-11	METAL CHIP	470K	5%	1/10W
R244	1-216-821-11	METAL CHIP	1K	5%	1/10W
R245	1-216-841-11	METAL CHIP	47K	5%	1/10W
R246	1-216-809-11	METAL CHIP	100	5%	1/10W
R248	1-216-803-11	METAL CHIP	33	5%	1/10W
R249	1-216-803-11	METAL CHIP	33	5%	1/10W
R250	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R251	1-216-841-11	METAL CHIP	47K	5%	1/10W
R253	1-218-889-11	METAL CHIP	56K	0.5%	1/10W
R254	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R255	1-218-889-11	METAL CHIP	56K	0.5%	1/10W
R256	1-216-809-11	METAL CHIP	100	5%	1/10W
R259	1-216-833-11	METAL CHIP	10K	5%	1/10W
R260	1-216-834-11	METAL CHIP	12K	5%	1/10W
R261	1-216-833-11	METAL CHIP	10K	5%	1/10W
R262	1-216-815-11	METAL CHIP	330	5%	1/10W
R263	1-216-861-11	METAL CHIP	2.2M	5%	1/10W
R264	1-216-845-11	METAL CHIP	100K	5%	1/10W
R265	1-216-838-11	METAL CHIP	27K	5%	1/10W
R269	1-216-833-11	METAL CHIP	10K	5%	1/10W
R273	1-216-864-11	SHORT CHIP	0		

MB

Ref. No.	Part No.	Description			Remark
R274	1-216-833-11	METAL CHIP	10K	5%	1/10W
R281	1-216-864-11	SHORT CHIP	0		
R282	1-216-864-11	SHORT CHIP	0		
R301	1-216-295-00	SHORT CHIP	0		
R302	1-216-295-00	SHORT CHIP	0		
R310	1-216-821-11	METAL CHIP	1K	5%	1/10W
R311	1-216-809-11	METAL CHIP	100	5%	1/10W
R312	1-218-831-11	METAL CHIP	220	0.5%	1/10W
R313	1-216-817-11	METAL CHIP	470	5%	1/10W
R314	1-216-817-11	METAL CHIP	470	5%	1/10W
R315	1-216-817-11	METAL CHIP	470	5%	1/10W
R316	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R317	1-216-833-11	METAL CHIP	10K	5%	1/10W
R318	1-216-817-11	METAL CHIP	470	5%	1/10W
R319	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R320	1-218-883-11	METAL CHIP	33K	0.5%	1/10W
R321	1-218-879-11	METAL CHIP	22K	0.5%	1/10W
R322	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R323	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W
R324	1-216-833-11	METAL CHIP	10K	5%	1/10W
R325	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R326	1-216-833-11	METAL CHIP	10K	5%	1/10W
R327	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R328	1-216-838-11	METAL CHIP	27K	5%	1/10W
R329	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R330	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R331	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R332	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R333	1-216-847-11	METAL CHIP	150K	5%	1/10W
R334	1-218-853-11	METAL CHIP	1.8K	0.5%	1/10W
R335	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R336	1-216-833-11	METAL CHIP	10K	5%	1/10W
R337	1-216-833-11	METAL CHIP	10K	5%	1/10W
R338	1-216-801-11	METAL CHIP	22	5%	1/10W
R349	1-216-833-11	METAL CHIP	10K	5%	1/10W
R351	1-216-295-00	SHORT CHIP	0		
R352	1-216-295-00	SHORT CHIP	0		
R358	1-216-833-11	METAL CHIP	10K	5%	1/10W
R359	1-216-833-11	METAL CHIP	10K	5%	1/10W
R360	1-216-809-11	METAL CHIP	100	5%	1/10W
R366	1-216-801-11	METAL CHIP	22	5%	1/10W
R402	1-216-295-00	SHORT CHIP	0		
R407	1-216-809-11	METAL CHIP	100	5%	1/10W
R414	1-216-833-11	METAL CHIP	10K	5%	1/10W
R416	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R418	1-216-822-11	METAL CHIP	1.2K	5%	1/10W
R419	1-216-797-11	METAL CHIP	10	5%	1/10W
R426	1-216-833-11	METAL CHIP	10K	5%	1/10W
R430	1-216-833-11	METAL CHIP	10K	5%	1/10W
R434	1-216-797-11	METAL CHIP	10	5%	1/10W
R506	1-216-864-11	SHORT CHIP	0		
R509	1-216-864-11	SHORT CHIP	0		
R511	1-216-864-11	SHORT CHIP	0		
R520	1-216-809-11	METAL CHIP	100	5%	1/10W
R524	1-216-864-11	SHORT CHIP	0		
R525	1-216-833-11	METAL CHIP	10K	5%	1/10W
R527	1-216-833-11	METAL CHIP	10K	5%	1/10W
R528	1-216-864-11	SHORT CHIP	0		
R530	1-216-833-11	METAL CHIP	10K	5%	1/10W
R531	1-216-833-11	METAL CHIP	10K	5%	1/10W
R532	1-216-833-11	METAL CHIP	10K	5%	1/10W
R536	1-216-864-11	SHORT CHIP	0		
R539	1-216-864-11	SHORT CHIP	0		
R541	1-216-864-11	SHORT CHIP	0		
R544	1-216-864-11	SHORT CHIP	0		
R546	1-216-864-11	SHORT CHIP	0		
R547	1-216-833-11	METAL CHIP	10K	5%	1/10W
R549	1-216-864-11	SHORT CHIP	0		
R551	1-216-864-11	SHORT CHIP	0		
R552	1-216-864-11	SHORT CHIP	0		
R556	1-216-864-11	SHORT CHIP	0		
R557	1-216-864-11	SHORT CHIP	0		
R566	1-216-864-11	SHORT CHIP	0		
R588	1-216-864-11	SHORT CHIP	0		
R589	1-216-864-11	SHORT CHIP	0		
R590	1-216-797-11	METAL CHIP	10	5%	1/10W
R592	1-216-864-11	SHORT CHIP	0		
R593	1-216-864-11	SHORT CHIP	0		
R601	1-216-864-11	SHORT CHIP	0		
R603	1-216-809-11	METAL CHIP	100	5%	1/10W
R605	1-216-833-11	METAL CHIP	10K	5%	1/10W
R614	1-216-864-11	SHORT CHIP	0		
R615	1-218-285-11	METAL CHIP	75	5%	1/10W
R617	1-218-292-11	METAL CHIP	20K	5%	1/10W
R618	1-216-864-11	SHORT CHIP	0		
R620	1-216-864-11	SHORT CHIP	0		
R639	1-216-864-11	SHORT CHIP	0		
R640	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R663	1-216-864-11	SHORT CHIP	0		
R664	1-216-864-11	SHORT CHIP	0		
R665	1-216-864-11	SHORT CHIP	0		
R674	1-216-819-11	METAL CHIP	680	5%	1/10W
R675	1-216-821-11	METAL CHIP	1K	5%	1/10W
R676	1-216-821-11	METAL CHIP	1K	5%	1/10W
R677	1-216-809-11	METAL CHIP	100	5%	1/10W
R678	1-218-834-11	METAL CHIP	300	0.5%	1/10W
R679	1-218-834-11	METAL CHIP	300	0.5%	1/10W
R680	1-218-834-11	METAL CHIP	300	0.5%	1/10W
R681	1-218-834-11	METAL CHIP	300	0.5%	1/10W
R682	1-218-834-11	METAL CHIP	300	0.5%	1/10W
R683	1-218-834-11	METAL CHIP	300	0.5%	1/10W
R686	1-216-809-11	METAL CHIP	100	5%	1/10W
R687	1-216-809-11	METAL CHIP	100	5%	1/10W
R697	1-216-864-11	SHORT CHIP	0		
R698	1-216-864-11	SHORT CHIP	0		
R701	1-216-833-11	METAL CHIP	10K	5%	1/10W
R702	1-216-833-11	METAL CHIP	10K	5%	1/10W
R705	1-216-809-11	METAL CHIP	100	5%	1/10W
R706	1-216-864-11	SHORT CHIP	0		
R712	1-216-833-11	METAL CHIP	10K	5%	1/10W
R713	1-216-295-00	SHORT CHIP	0		
R716	1-216-833-11	METAL CHIP	10K	5%	1/10W
R717	1-216-833-11	METAL CHIP	10K	5%	1/10W
R719	1-216-833-11	METAL CHIP	10K	5%	1/10W
R720	1-216-833-11	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R722	1-216-833-11	METAL CHIP	10K	5%	1/10W
R728	1-216-809-11	METAL CHIP	100	5%	1/10W
R729	1-216-809-11	METAL CHIP	100	5%	1/10W
R730	1-216-809-11	METAL CHIP	100	5%	1/10W
R735	1-216-809-11	METAL CHIP	100	5%	1/10W
R738	1-216-833-11	METAL CHIP	10K	5%	1/10W
R791	1-216-809-11	METAL CHIP	100	5%	1/10W
R801	1-216-864-11	SHORT CHIP	0		
R802	1-216-864-11	SHORT CHIP	0		
R803	1-216-864-11	SHORT CHIP	0		
R804	1-216-864-11	SHORT CHIP	0		
R805	1-216-864-11	SHORT CHIP	0		
R806	1-216-864-11	SHORT CHIP	0		
R807	1-216-864-11	SHORT CHIP	0		
R808	1-216-864-11	SHORT CHIP	0		
R809	1-216-864-11	SHORT CHIP	0		
R810	1-216-864-11	SHORT CHIP	0		
R812	1-216-864-11	SHORT CHIP	0		
R813	1-216-864-11	SHORT CHIP	0		
R815	1-216-864-11	SHORT CHIP	0		
R830	1-216-864-11	SHORT CHIP	0		
R902	1-216-864-11	SHORT CHIP	0		
R907	1-216-864-11	SHORT CHIP	0		
R909	1-216-834-11	METAL CHIP	12K	5%	1/10W
R910	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R913	1-216-803-11	METAL CHIP	33	5%	1/10W
R915	1-216-821-11	METAL CHIP	1K	5%	1/10W
R916	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R917	1-216-864-11	SHORT CHIP	0		
R919	1-216-809-11	METAL CHIP	100	5%	1/10W
R921	1-216-833-11	METAL CHIP	10K	5%	1/10W
R922	1-216-833-11	METAL CHIP	10K	5%	1/10W
R931	1-216-833-11	METAL CHIP	10K	5%	1/10W
R955	1-216-809-11	METAL CHIP	100	5%	1/10W
R956	1-216-809-11	METAL CHIP	100	5%	1/10W
R957	1-216-809-11	METAL CHIP	100	5%	1/10W
R958	1-216-809-11	METAL CHIP	100	5%	1/10W
R959	1-216-809-11	METAL CHIP	100	5%	1/10W
R960	1-216-809-11	METAL CHIP	100	5%	1/10W
R961	1-216-809-11	METAL CHIP	100	5%	1/10W
R962	1-216-809-11	METAL CHIP	100	5%	1/10W
R963	1-216-809-11	METAL CHIP	100	5%	1/10W
R964	1-216-809-11	METAL CHIP	100	5%	1/10W

< COMPOSITION CIRCUIT BLOCK >

RB102	1-233-270-11	NETWORK, RES (8 GANG) 10K			
RB103	1-233-576-11	RES, CHIP NETWORK 100			
RB104	1-233-576-11	RES, CHIP NETWORK 100			
RB105	1-233-576-11	RES, CHIP NETWORK 100			
RB106	1-233-576-11	RES, CHIP NETWORK 100			
RB107	1-233-576-11	RES, CHIP NETWORK 100			
RB108	1-233-576-11	RES, CHIP NETWORK 100			
RB109	1-233-576-11	RES, CHIP NETWORK 100			
RB110	1-233-576-11	RES, CHIP NETWORK 100			
RB111	1-233-576-11	RES, CHIP NETWORK 100			
RB901	1-236-908-11	RES, CHIP NETWORK 10K (3216)			
RB902	1-236-908-11	RES, CHIP NETWORK 10K (3216)			

Ref. No.	Part No.	Description			Remark

< VARIABLE RESISTOR >

RV101	1-223-587-11	RES, ADJ, CARBON 22K			
RV601	1-223-583-41	RES, ADJ, CARBON (3 TYPE) 1K			
RV602	1-223-583-41	RES, ADJ, CARBON (3 TYPE) 1K			

< VIBRATOR >

X101	1-795-174-11	VIBRATOR, CERAMIC (16.5MHz)			
X102	1-781-867-21	VIBRATOR, CRYSTAL (27MHz)			

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	A-4733-726-A	PANEL-L BOARD, COMPLETE			
		**********			
	4-246-508-01	HOLDER (FL)			
	4-949-935-41	CUSHION (FL)			

< CAPACITOR >

C1003	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C1005	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1009	1-115-156-11	CERAMIC CHIP	1uF		10V
C1011	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1014	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1015	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1016	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C1017	1-124-589-11	ELECT	47uF	20%	16V
C1019	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C1031	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1032	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1033	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1034	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1035	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1036	1-162-922-11	CERAMIC CHIP	39PF	5%	50V
C1038	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C1041	1-124-589-11	ELECT	47uF	20%	16V
C1042	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C1052	1-124-589-11	ELECT	47uF	20%	16V
C1081	1-128-131-11	ELECT	22uF	20%	50V
C1082	1-137-150-11	FILM	0.01uF	5%	100V
C1083	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C1085	1-128-131-11	ELECT	22uF	20%	50V
C1086	1-128-131-11	ELECT	22uF	20%	50V
C1087	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C1088	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C1089	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C1093	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V
C1094	1-115-339-11	CERAMIC CHIP	0.1uF	10%	50V

< CONNECTOR >

CN1001	1-764-177-11	PIN, CONNECTOR (SMD) (1.5mm) 7P			
CN1002	1-790-669-21	PIN, CONNECTOR (PC BOARD) 9P			
* CN1004	1-566-970-11	HOUSING, CONNECTOR (PC BOARD) 8P			
CN1005	1-778-691-11	CONNECTOR, FFC/FPC 19P			

< DIODE >

D1011	6-500-329-01	LED	SELU5E23C-PTP15 (PROGRESSIVE)		
D1012	6-500-324-01	LED	CL-191WA-D-T (SACD)		
D1013	6-500-329-01	LED	SELU5E23C-PTP15 (MULTI CHANNEL)		
D1014	8-719-046-39	LED	SEL5821A-TP15 (FL OFF)		

PANEL-L

Ref. No.	Part No.	Description			Remark
D1081	8-719-041-97	DIODE MA113-(TX)			
D1082	8-719-041-97	DIODE MA113-(TX)			
D1083	8-719-041-97	DIODE MA113-(TX)			
D1084	8-719-041-97	DIODE MA113-(TX)			
D1085	8-719-083-71	DIODE UDZSTE-1730B			
D1086	8-719-069-56	DIODE UDZSTE-176.2B			
		< SHORT >			
FB1001	1-216-295-00	SHORT CHIP	0		
		< FLUORESCENT INDICATOR TUBE >			
FL1001	1-518-904-11	INDICATOR TUBE, FLUORESCENT			
		< LEAD >			
G1002	1-775-377-11	LEAD (WITH CONNECTOR)			
		< IC >			
IC1003	6-803-267-01	IC uPD70F3259YGF-S05-JBT-A			
IC1004	8-759-826-34	IC NJL74H400A (REMOTE CONTROL RECEIVER)			
IC1006	6-704-158-01	IC S-80827CNUA-B8PT2G			
IC1007	8-759-680-17	IC MSM9201-04GS-K			
IC1008	8-759-350-42	IC PST9127NL			
IC1009	8-759-350-42	IC PST9127NL			
		< COIL >			
L1081	1-400-096-21	INDUCTOR	47uH		
L1082	1-400-096-21	INDUCTOR	47uH		
		< TRANSISTOR >			
Q1001	8-729-900-53	TRANSISTOR	DTC114EK		
Q1002	8-729-900-53	TRANSISTOR	DTC114EK		
Q1011	8-729-900-53	TRANSISTOR	DTC114EK		
Q1012	8-729-900-53	TRANSISTOR	DTC114EK		
Q1013	8-729-900-53	TRANSISTOR	DTC114EK		
Q1014	8-729-900-53	TRANSISTOR	DTC114EK		
Q1016	8-729-900-53	TRANSISTOR	DTC114EK		
Q1017	8-729-900-53	TRANSISTOR	DTC114EK		
Q1071	8-729-120-28	TRANSISTOR	2SC1623-L5L6		
Q1081	8-729-808-01	TRANSISTOR	2SD1622-S		
Q1082	8-729-808-01	TRANSISTOR	2SD1622-S		
Q1083	8-729-804-41	TRANSISTOR	2SB1122-S		
		< RESISTOR/CAPACITOR >			
R1001	1-216-841-11	METAL CHIP	47K	5%	1/10W
R1009	1-216-845-11	METAL CHIP	100K	5%	1/10W
R1011	1-216-295-00	SHORT CHIP	0		
R1012	1-216-295-00	SHORT CHIP	0		
R1013	1-216-295-00	SHORT CHIP	0		
R1014	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1015	1-216-809-11	METAL CHIP	100	5%	1/10W
R1016	1-216-809-11	METAL CHIP	100	5%	1/10W
R1017	1-216-295-00	SHORT CHIP	0		
R1018	1-216-809-11	METAL CHIP	100	5%	1/10W
R1019	1-216-809-11	METAL CHIP	100	5%	1/10W
R1020	1-216-833-11	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R1021	1-216-805-11	METAL CHIP	47	5%	1/10W
R1022	1-216-295-00	SHORT CHIP	0		
R1023	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1024	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1025	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1026	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1028	1-216-801-11	METAL CHIP	22	5%	1/10W
R1029	1-216-801-11	METAL CHIP	22	5%	1/10W
R1031	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1032	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1033	1-216-295-00	SHORT CHIP	0		
R1035	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1036	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1038	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1039	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1040	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1041	1-115-156-11	CERAMIC CHIP	1uF		10V
R1042	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1043	1-216-295-00	SHORT CHIP	0		
R1044	1-216-810-11	METAL CHIP	120	5%	1/10W
R1045	1-216-803-11	METAL CHIP	33	5%	1/10W
R1046	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1047	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1051	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1052	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1053	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1054	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1055	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1056	1-216-837-11	METAL CHIP	22K	5%	1/10W
R1057	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1058	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1059	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1060	1-216-295-00	SHORT CHIP	0		
R1061	1-216-809-11	METAL CHIP	100	5%	1/10W
R1062	1-216-818-11	METAL CHIP	560	5%	1/10W
R1063	1-216-809-11	METAL CHIP	100	5%	1/10W
R1064	1-216-811-11	METAL CHIP	150	5%	1/10W
R1067	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
R1068	1-216-789-11	METAL CHIP	2.2	5%	1/10W
R1069	1-216-295-00	SHORT CHIP	0		
R1071	1-216-809-11	METAL CHIP	100	5%	1/10W
R1073	1-216-841-11	METAL CHIP	47K	5%	1/10W
R1074	1-216-809-11	METAL CHIP	100	5%	1/10W
R1076	1-216-841-11	METAL CHIP	47K	5%	1/10W
R1077	1-216-809-11	METAL CHIP	100	5%	1/10W
R1078	1-216-801-11	METAL CHIP	22	5%	1/10W
R1079	1-216-801-11	METAL CHIP	22	5%	1/10W
R1080	1-216-845-11	METAL CHIP	100K	5%	1/10W
R1081	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R1082	1-218-867-11	METAL CHIP	6.8K	5%	1/10W
R1083	1-216-828-11	METAL CHIP	3.9K	5%	1/10W
R1084	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1085	1-216-801-11	METAL CHIP	22	5%	1/10W
R1086	1-216-801-11	METAL CHIP	22	5%	1/10W
R1087	1-216-801-11	METAL CHIP	22	5%	1/10W
R1088	1-216-801-11	METAL CHIP	22	5%	1/10W
R1089	1-216-801-11	METAL CHIP	22	5%	1/10W
R1090	1-216-801-11	METAL CHIP	22	5%	1/10W

PANEL-L **PANEL-R** **POWER**

Ref. No.	Part No.	Description			Remark
R1091	1-216-801-11	METAL CHIP	22	5%	1/10W
R1092	1-216-801-11	METAL CHIP	22	5%	1/10W
R1093	1-216-801-11	METAL CHIP	22	5%	1/10W
R1094	1-216-801-11	METAL CHIP	22	5%	1/10W
R1095	1-216-801-11	METAL CHIP	22	5%	1/10W
R1096	1-216-801-11	METAL CHIP	22	5%	1/10W
R1097	1-216-801-11	METAL CHIP	22	5%	1/10W
R1098	1-216-801-11	METAL CHIP	22	5%	1/10W
R1099	1-216-827-11	METAL CHIP	3.3K	5%	1/10W
		< SWITCH >			
S1001	1-771-410-21	SWITCH, TACTILE (FL OFF)			
S1002	1-771-410-21	SWITCH, TACTILE (TIME/TEXT)			
S1003	1-771-410-21	SWITCH, TACTILE (PICTURE MODE)			
S1004	1-771-410-21	SWITCH, TACTILE (SURROUND)			
S1006	1-771-410-21	SWITCH, TACTILE (FOLDER)			
S1007	1-771-410-21	SWITCH, TACTILE (1/ALL DISC)			
S1008	1-771-410-21	SWITCH, TACTILE (I/⏻)			
S1009	1-771-410-21	SWITCH, TACTILE (LOAD)			
		< TRANSFORMER >			
T1081	1-437-887-11	TRANSFORMER, DC-DC CONVERTER			
		< VIBRATOR >			
X1001	1-795-058-21	VIBRATOR, CERAMIC (5MHz)			
**********					
	A-4733-713-A	PANEL-R BOARD, COMPLETE			
		**********			
		< LED >			
D1101	8-719-046-39	LED SEL5821A-TP15 (DISC CHANGE)			
D1102	8-719-046-41	LED SEL5521C-TP15 (DITECT SERACH)			
		< SWITCH >			
JG1101	1-786-546-11	SWITCH, TACTILE (PUSH ENTER)			
		< RESISTOR >			
R1101	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1102	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1103	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1104	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1105	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1106	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1107	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1108	1-216-837-11	METAL CHIP	22K	5%	1/10W
R1109	1-216-841-11	METAL CHIP	47K	5%	1/10W
R1110	1-216-821-11	METAL CHIP	1K	5%	1/10W
R1111	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1112	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R1113	1-216-829-11	METAL CHIP	4.7K	5%	1/10W
R1114	1-216-833-11	METAL CHIP	10K	5%	1/10W
R1115	1-216-837-11	METAL CHIP	22K	5%	1/10W
R1116	1-216-811-11	METAL CHIP	150	5%	1/10W
R1117	1-216-811-11	METAL CHIP	150	5%	1/10W
R1118	1-216-827-11	METAL CHIP	3.3K	5%	1/10W

Ref. No.	Part No.	Description	Remark
		< ROTARY ENCODER >	
RE1101	1-475-543-11	ENCODER, ROTARY (DIASC AMS, PUSH ENTER)	
		< SWITCH >	
S1101	1-771-410-21	SWITCH, TACTILE (OPEN/CLOSE)	
S1102	1-771-410-21	SWITCH, TACTILE (⏏ DISC EJECT)	
S1103	1-771-410-21	SWITCH, TACTILE (▷)	
S1104	1-771-410-21	SWITCH, TACTILE (TOP MENU)	
S1105	1-771-410-21	SWITCH, TACTILE (DISPLAY)	
S1106	1-771-410-21	SWITCH, TACTILE (MENU)	
S1107	1-771-410-21	SWITCH, TACTILE (■)	
S1108	1-771-410-21	SWITCH, TACTILE (▮▮)	
S1109	1-771-410-21	SWITCH, TACTILE (↩ RETURN)	
S1110	1-771-410-21	SWITCH, TACTILE (+100)	
S1111	1-771-410-21	SWITCH, TACTILE (DISC CHANGE)	
S1112	1-771-410-21	SWITCH, TACTILE (DIRECT SERACH)	
**********			
	1-477-958-11	POWER BLOCK (Including POWER BOARD)	
		**********	
		< CAPACITOR >	
⚠C101	1-165-528-11	FILM 0.1uF 10%	275V
⚠C102	1-165-528-11	FILM 0.1uF 10%	275V
⚠C103	1-113-928-11	CERAMIC 100PF 10%	125V
⚠C104	1-113-928-11	CERAMIC 100PF 10%	125V
⚠C107	9-885-036-09	ELECT 120uF	
⚠C110	1-126-964-11	ELECT 10uF 20%	50V
⚠C114	1-126-947-11	ELECT 47uF 20%	35V
C201	9-885-020-98	ELECT 220uF	25V
C202	1-126-947-11	ELECT 47uF 20%	35V
C212	9-885-036-15	ELECT 330uF	
C301	9-885-036-16	ELECT 1000uF	
C302	1-126-964-11	ELECT 10uF 20%	50V
C303	1-126-960-11	ELECT 1uF 20%	50V
C304	1-126-933-11	ELECT 100uF 20%	16V
C308	1-126-947-11	ELECT 47uF 20%	35V
C309	1-126-947-11	ELECT 47uF 20%	35V
C402	1-126-947-11	ELECT 47uF 20%	35V
C502	9-885-020-98	ELECT 220uF	25V
C503	1-126-947-11	ELECT 47uF 20%	35V
C504	9-885-020-98	ELECT 220uF	25V
C505	1-126-947-11	ELECT 47uF 20%	35V
		< CONNECTOR >	
* CN101	1-580-230-31	PIN, CONNECTOR (PC BOARD) 2P	
* CN201	1-564-715-11	PIN, CONNECTOR (SMALL TYPE) 13P	
		< DIODE >	
⚠D101	9-885-020-72	DIODE 1N4005L	
⚠D102	9-885-020-72	DIODE 1N4005L	
⚠D103	9-885-020-72	DIODE 1N4005L	
⚠D104	9-885-020-72	DIODE 1N4005L	
⚠D106	8-719-081-77	DIODE SARS01	
⚠D107	8-719-063-70	DIODE D1NL20U	
⚠D108	8-719-921-63	DIODE MTZJ7.5	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

POWER | RS-232C | SENSOR

Ref. No.	Part No.	Description			Remark
D201	8-719-063-70	DIODE D1NL20U			
D211	9-885-036-10	DIODE D2L20U			
D213	8-719-901-33	DIODE 1SS133			
D301	8-719-510-73	DIODE S3L20U			
D302	9-885-020-72	DIODE 1N4005L			
D303	9-885-020-72	DIODE 1N4005L			
D304	9-885-020-72	DIODE 1N4005L			
D305	8-719-510-73	DIODE S3L20U			
D308	8-719-901-33	DIODE 1SS133			
D501	9-885-036-10	DIODE D2L20U			
D502	8-719-063-70	DIODE D1NL20U			
		< FUSE >			
⚠F101	9-885-020-67	FUSE (2A/125V)			
		< TERMINAL EARTH >			
* FG001	1-537-738-21	TERMINAL, EARTH			
* FG002	1-537-738-21	TERMINAL, EARTH			
* FG003	1-537-738-21	TERMINAL, EARTH			
* FG004	1-537-738-21	TERMINAL, EARTH			
		< IC >			
⚠IC101	9-885-036-08	IC MIP2E5DMY			
IC301	8-759-420-19	IC AN1431			
IC302	(Not supplied)				
IC401	(Not supplied)				
		< COIL >			
⚠L101	9-885-020-69	FILTER, LINE			
⚠L102	9-885-020-69	FILTER, LINE			
⚠L104	9-885-020-70	CORE, BEAD			
		< IC LINK >			
P301	9-885-036-14	LINK, IC			
P502	9-885-024-65	LINK, IC			
		< PHOTO COUPLER >			
⚠PC101	8-749-924-35	PHOTO COUPLER ON3171			
		< TRANSISTOR >			
Q201	9-885-021-04	FET	2SJ525		
Q202	8-729-901-78	TRANSISTOR	2SC2412K-R		
Q301	9-885-021-04	FET	2SJ525		
Q302	8-729-901-78	TRANSISTOR	2SC2412K-R		
Q501	9-885-022-75	TRANSISTOR	2SD1862		
Q502	8-729-027-34	TRANSISTOR	DTA143EKA-T146		
		< RESISTOR >			
⚠R104	1-216-805-11	METAL CHIP	47	5%	1/10W
R211	1-216-833-11	METAL CHIP	10K	5%	1/10W
R212	1-216-821-11	METAL CHIP	1K	5%	1/10W
R213	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R301	1-216-809-11	METAL CHIP	100	5%	1/10W
R302	1-216-821-11	METAL CHIP	1K	5%	1/10W
R303	1-216-831-11	METAL CHIP	6.8K	5%	1/10W
R304	1-216-833-11	METAL CHIP	10K	5%	1/10W
R306	1-216-833-11	METAL CHIP	10K	5%	1/10W
R308	1-216-833-11	METAL CHIP	10K	5%	1/10W
R309	1-216-821-11	METAL CHIP	1K	5%	1/10W

When any part on the POWER board except the ones listed above needs to be replaced, replace the entire mounted board.

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	A-4733-728-A	RS-232C BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C815	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN801	1-573-806-21	PIN, CONNECTOR (1.5mm) (SMD) 6P			
		< RESISTOR >			
R818	1-216-825-11	METAL CHIP	2.2K	5%	1/10W
R819	1-216-821-11	METAL CHIP	1K	5%	1/10W
		< SWITCH >			
S801	1-692-989-11	SWITCH, SLIDE (COMMAND MODE)			

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	A-4733-732-A	SENSOR BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C81	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
* CN81	1-506-486-11	PIN, CONNECTOR 7P			
CN82	1-506-481-11	PIN, CONNECTOR 2P			
CN83	1-506-481-11	PIN, CONNECTOR 2P			
		< PHOTO INTERRUPTER >			
IC81	8-749-924-18	PHOTO INTERRUPTER	RPI-1391		
IC82	8-749-924-18	PHOTO INTERRUPTER	RPI-1391		
IC83	8-749-924-18	PHOTO INTERRUPTER	RPI-1391		
IC84	8-749-924-18	PHOTO INTERRUPTER	RPI-1391		
		< RESISTOR >			
R81	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R82	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R83	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R84	1-216-649-11	METAL CHIP	820	0.5%	1/10W
R85	1-208-778-11	METAL CHIP	680	0.5%	1/10W

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Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
2	1-827-575-11	WIRE (FLAT TYPE) (9 CORE)	
3	1-827-583-11	WIRE (FLAT TYPE) (26 CORE)	
4	1-827-585-11	WIRE (FLAT TYPE) (23 CORE)	
5	1-827-584-11	WIRE (FLAT TYPE) (27 CORE)	
56	1-827-576-11	WIRE (FLAT TYPE) (19 CORE)	
⚠105	1-783-531-32	CORD, POWER	
⚠501	A-6061-908-A	OPTICAL PICK-UP KHM-290AAA	(SERVICE ASSY)
M601	A-4672-895-A	MOTOR (400) ASSY (TABLE)	
M602	A-4672-895-A	MOTOR (400) ASSY (LOADING)	
M603	1-541-632-12	MOTOR, DC (DOOR)	
**********			
		ACCESSORIES	
		**********	
	1-477-980-11	COMMANDER, STANDARD (RM-DX500)	
	1-823-364-21	CORD, CONNECTION (AUDIO/VIDEO)	
	3-073-096-01	LID, BATTERY CASE (for RM-DX500)	
	4-249-721-12	MANUAL, INSTRUCTION (ENGLISH)	
	4-249-721-22	MANUAL, INSTRUCTION (FRENCH) (Canadian)	

REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2003.08	New
1.1	2004.09	Addition of “NOTE OF REPLACING THE MB BOARD” to SERVICING NOTES (SPM-04038)